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ARTICLE XXX.

ON THE CONVEYANCE OF CHOLERA FROM INDIA THROUGH PERSIA, ARMENIA, AND GEORGIA, TO RUSSIA AND THE REST OF EUROPE.

BY JOHN C. PETERS, M.D., of New York.

There is a great nursery of cholera in the northern part of Hindostan, at the foot of the Himalaya Mountains, *viz.*, at HURDWAR, where the thrice sacred Ganges emerges from the mountains, and from being a tiny stream becomes a river, and descends upon the land which it is to fertilize and bless. The largest of all the Hindoo festivals and fairs is held at Hurdwar every year, at the time of the vernal equinox, *viz.*, in April, when at least 200,000 or 300,000 pilgrims and merchants always assemble there. But every twelfth year, which is particularly holy, as many as 1,500,000 to 3,000,000 of devotees and traders are often crowded together. This festival is not only the focus for the produce of all Hindostan, from Calcutta in the south-east, and Bombay in the south-west, and all the intermediate cities and provinces; but merchants and pilgrims also hasten there from Arabia, Persia, Beloochistan, Afghanistan, Cabul, Independent Tartary, Central Asia, and Russia.

As a matter of course, cholera is often brought to Hurdwar; often originates there; and is frequently carried away from it,

not only down the Ganges, Jumna, and Indus rivers, but also up to the north and west, *viz.*, to Afghanistan and Cabul, and from thence to Persia and Independent Tartary and Russia. It leaves India in three directions. The principal line of travel is from Hurdwar to Lahore, from there to Attock and Peshawur, through the great Kyber Pass to the city of Cabul. The second is from Hurdwar to the city of MOULTAN, through the Bolan Pass to Kelat in Belochistan, and to Candahar in Afghanistan. A third stream of the disease is carried down the river Indus to Kurrachee and Bombay, and from there forwarded over to Arabia, and up the Persian Gulf and Red Sea.

In 1783, over 1,500,000 devotees assembled at Hurdwar, and in eight days over 20,000 of them died of cholera. Twelve years after, *viz.*, in 1795, the same thing occurred in a lesser degree; also in 1807. In 1867, *viz.*, 5 times 12, or 60 years afterwards, the *London Lancet* tells us 3,000,000 of Hindoos assembled at Hurdwar, and, in consequence, a very disastrous outbreak of cholera took place.

The cholera of 1827 destroyed 30,000 persons in Lahore, then passed north through Attock and Peshawur and reached Cabul, from whence it was distributed due west to Herat, Meschid, and Teheran, and reached Russia, at Astrakhan, in 1829 and 1830. From Cabul it also passed north, to Balk, Bokhara, and Khiva, and reached Orenburg, in Russia, in 1829.

The epidemic of 1841 began its second great emigration, after prevailing in a frightful manner along the rivers Ganges and Indus, reached Lahore, was carried to Cabul, and conveyed, by pilgrims, from Herat, in November, 1845, to the holy city of Meschid; from there it went to Teheran, in June, 1846, and prevailed so frightfully as to kill 9000 persons in four months. From Teheran it was again carried to Russia, in 1846 and 1847. From Cabul it was also carried to Balk, Bokhara, and Samarcand in 1845; and to Khiva and Orenburg in 1846.—DRASCHE.

The great pandemic of 1849 passed along the same routes, killing 15,000 persons in Teheran in 1851, and 11,000 more in 1852 and 1853. We have given these dates and figures solely

to prove the importance of attention to these great routes of cholera towards Europe from the north-west provinces of Hindostan.

CABUL is the first great town to the north-west over the borders of the British possessions in India. It is the grand centre of the trade of India with Persia, Central Asia, and Russia. It is the southern terminus of the Russian commerce with Hindostan, and has long been the theatre of the commercial and political rivalry of Russia and England, in their attempts to control Persia and Central Asia. Cholera is regularly brought up to Cabul from Hurdwar, through Lahore, Attock, and Peshawur, and, although it is called "the city of 100,000 gardens," parts of it are well adapted to multiply the infection of cholera. Many of its small streets are built over, forming low, dark tunnels, containing every offensive thing. Water collects and stagnates in ponds all over the city; the inhabitants cast out the refuse of their houses into the streets; and dead dogs and cats are frequently seen lying on heaps of the vilest filth, while dead horses occasionally pollute the air for many days together. —Sir ARTHUR CONNOLLY.

The traffic between Russia, Persia, Central Asia, and India, by way of Cabul, is made under curious conditions, which have descended from high antiquity; for it belongs to four tribes of Lohanee Afghans, called *Provindahs*, who are both pastoral and mercantile in their pursuits, and number 8000 families, with over 30,000 camels and 10,000 oxen of transport. They organize themselves into three immense caravans, which resemble veritable *corps d'armee*, and descend into India, not only in time to attend the great fair at Hurdwar, but also to penetrate down the Ganges to Benares, and along the Indus to Kurrachee, and thence by sea to Bombay. They bring down Russian, Persian, and Afghanistan articles of trade, and return with cotton goods, muslins, shawls, silks, brocades, and innumerable other articles. The first great division has 20,000 to 30,000 camels, numerous oxen, and 50,000 to 60,000 head of sheep; the second division, 10,000 to 17,000 camels and a proportionate number of oxen and sheep; and the third division, 3000 to

5000 camels. These all return to Cabul and Candahar by the middle of June, in time to dispatch their investments on to Herat and Meschid in the west, and to Balk and Bokhara in the north-west. They also always descend again into India by the end of October, with 36 different Russian articles, and return with 64 kinds of English and India goods. From 1500 to 2000 camels are alone employed in conveying pomegranate rinds, which dress leather in a superior manner; 3000 camels carry coarse cotton cloths from India to Cabul; five caravans with shawls, from the 16,000 looms in Cashmere, have arrived in Cabul in one year; much salt is carried up from the inexhaustible mines at Lahore; many thousand camel-loads of fresh and dried fruits are brought down to India; and Russian goods are so cheap and common in Cabul, at times, that looking-glasses, large enough to serve as window-panes, are sold for half a dollar. In addition, there is a great Hindoo festival on the banks of the Indus, near Attock, every April, to which great crowds congregate. Pilgrims also come down from Cabul to the river Indus, which they descend to the sea and then pass on to Mecca; and a great Mohammedan festival takes place on the 28th of March. Such are the causes which propel cholera up from India to Candahar and Cabul.—Sir ALEX. BURNES.

From Cabul, the disease is always carried due west to HERAT. Occasionally, it has happened that a single traveller or pilgrim could proceed, unarmed, from Cabul to Herat. But, generally, the merchants and devotees travel in great caravans, with long strings of camels. They are armed to the teeth, and often bear the marks of many a conflict. Now and then some prince, like the son of the King of Lucknow, comes up with a large suite of Indo-Mohammedans; and it is thought that over 60,000 pilgrims pass through Herat every year, on their way west to the holy city of Meschid.

Herat has at least 50,000 inhabitants, and is a well-known town; but in 1857, the *London Times* asked, "Where is Herat?" It is in the extreme north-western corner of Afghanistan, and stands in the same relation to this province that Peshawur does to India; for it is the only gate by which it can be approached

from the west. All the practicable roads from Persia and Central Asia converge and unite as they approach Herat. It is the door and citadel which must be opened before caravans and armies from Persia and the west can reach Afghanistan and Hindostan. Its situation is one of the greatest military and commercial importance; for the peaceful files of the caravan and the dread battalions of war must alike pass through it on their way from India to Persia, and from Persia to India. Long camel trains, coming up from Delhi, Moultan, Hurdwar, and Lahore, traverse it, bearing the products of India and the manufactures of England to the distant towns and oases of Persia and Turkistan. So completely is Herat a gateway of commerce, that it is called a "*bunder*," or port, although the only seas upon which it borders are seas of sand. The march of conquest has led through it from time immemorial, especially after the time of Mohammed. Since A.D. 710, host after host of fierce warriors, led by the Kaliphs of Damascus and Bagdad, of Syria and Western Persia, coming almost from the borders of the Caspian, Black, and Mediterranean Seas, have carried the tassels of the Mohammedan flag victoriously down into India. The vast and fertile plain about Herat has often been a huge *place d'armes*, where all the assembled columns from the west have united and recruited before making their final descent upon Hindostan, and it has often been predicted that the Cossack and the Sepoy must, sooner or later, meet there in deadly strife. No better camping-ground and quarters have ever been found for caravans and armies. Abundant crops of wheat and barley, and every kind of fruit known to Persia, grow there in profusion. Cattle and sheep abound. The bright waters of the river are as "clear as tears," and numerous running streams and artificial canals light up the pleasant landscape and fertilize the soil. Such is the profusion of roses, that it is called the "*City of Roses*," and a very large proportion of the whole world's supply of the celebrated "Attar" comes from it. But there are other smells than those from roses about Herat. At night, on the road, one is apt to be wakened by the shouts of drivers and the tinkling of bells, announcing a

passing caravan, and by the faint light of the moon perceives a sea of long, black boxes surging by on scores of mules and camels. Each animal is laden with two of these horrible objects, one on each side, and many of them are so loosely nailed together that another sense than that of smell soon convinces one that they are used as coffins. In fact, they contain the bodies of the devout, who, having died in the true faith, are now being taken to be buried in holy ground at Kerbela or Meschid. They are often carried hundreds of miles, and a sickening stench always comes up from their gaping fissures, causing nausea and faintness in the drowsy, unsuspecting traveler, who finds it impossible to extricate himself promptly from their neighborhood; for they come crowding on in the dark as if there were no limit to their numbers.

The cholera of 1828 swept away many thousands in Herat, although water, that prime necessity of Oriental life, is so abundant that almost every house has its fountain, besides the large public ones in the streets and bazaars. Each successive epidemic of the disease in Hindostan has reached Herat, and been carried on through Persia to Turkey and Russia. That of 1841, reached Cabul in June; Herat in August; Meschid in September; and Teheran in October.

The next important town due west of Herat is MESCHID. This is so holy that no person of any sect called Mohammedan has ever dared to commit the impiety of firing a hostile shot at its walls. For eight months in the year all the roads to and from Meschid are thronged with pilgrims. Nearly 60,000 come up from India, Cabul, and Afghanistan; and as many more from the south of Persia. Over 100,000 crowd on fanatically from Turkey in Asia and the Caucasus in the west; and perhaps an equal number from the north.

Connolly says, the distant cities in which the pilgrims assemble and make themselves up into caravans, to go to Meschid, are so thronged with men and animals, that there is scarcely passage through the crowd. Horses, mules, camels, and cattle are picketed the entire length of the outer walls, where they neigh, bray, and fight, while their masters are busy currying or shoeing

them; mending pack-saddles; higgling for supplies of straw or corn; or sleeping, praying, or reading the Koran.

The pilgrims generally travel at night; some of them carry torches, and at the head of the line a pot of live charcoal swings under the belly of a horse, to light their pipes and mark the line of march. In cool and pleasant weather they move by day. Gay pennons are then unfurled; and all go on with light hearts. From time to time, their leaders raise a shout for the blessed Mohammed, and if their followers do not join in loudly and unanimously, they are urged to do "better than that," "sweeter than that," angels are called upon to aid them, till, finally, the air is rent with fervent and inspiring cries, which makes one's very heart's blood boil. Going and returning pilgrims greet each other on the road. Many others are seen encamped at the road-side; the poorer pilgrims in miserable tents and shelters, but the richer Turks and Persians in green, sky-blue, or white tents, surmounted by gilt balls and crescents, and lined with costly carpets. Well-clad male and female servants, in numberless groups, walk, recline, sit, smoke, or chat in and about the camps. Hundreds of horses, richly caparisoned, graze around. Huge piles of baggage and provisions are guarded by trusty soldiers, bristling to their chins with silver-hilted daggers and inlaid pistols. The whole bearing an air of wealth, pomp, and security.

The scene is more wild and strange when the pilgrims halt at caravansaries. The noise and quarreling, at first, can only be imagined by those who have seen Persians on the march. But the leader of the caravan soon takes his place in the middle of the square, and commences reciting prayers and verses in honor of the Prophet, to which the pilgrims shout short sentences from the Koran in reply. Connolly says, the effect of their voices coming from the cells on all sides is very wild and pleasing, especially at night, when the sounds gradually rise, chiming in with each other till they are perfectly blended in one full chorus. But soon all fall asleep and silence reigns, in cells which are so filthy that few Europeans can remain in them.

Finally, the holy city is reached, and several times in the

course of every day dense troops of soiled and jaded pilgrims and travelers pass through the city gates of Meschid, into the great square, which is usually crowded with people from all parts of the East: with Afghans, Arabs, Koords, Turks, Osbegs; with pilgrims from all the provinces of Persia; with priests, merchants, peasants, and dervishes, without number, fromt he borders of the Caspian and Black Seas, and from the Persian Gulf. The great and magnificent square is approached from two sides by very high arched gates, of exquisite architecture, faced with brilliant blue-enameled tiles. On the other two sides are deep arched porches, of the same height and proportions as the gates, but covered with copper tiles, heavily gilt. One porch leads into a fine mosque; the other faces a high, gilded minaret, and the golden dome under which rest the sacred remains of the Iman. The space between the gates and porches is enclosed on all sides by a double story of arched cloisters, fronted with mosaic work and paved with the gorgeous gravestones of rich and holy men. A stone canal conducts water through the centre of the square, for the ablutions of the faithful, and beautiful shade trees abound. The midday sunbeams are reflected gorgeously from the many-colored and golden tiles; and the light of the declining luminary falls glowing upon the resplendent dome. But the most glorious effect is produced when rain falls while the sun is breaking through light clouds, causing the large drops which are shed from the golden tiles to glitter like enormous diamonds. This sparkling shower on the gilt dome is often worshipped as a down-pour of heavenly light, and excites the pilgrims to a perfect frenzy of enthusiasm.

But Meschid presents other sights and sounds than those of religion and pleasantness. Hundreds and thousands of beggars, of the most miserably squalid appearance, beset every approach to the shrine, waylaying the pilgrims in every direction. Old men and women, in the most abject states of want and misery, throng the streets, which are also strewn with children, not more than two or three years old, grovelling in the dirt, mere living skeletons, more like starved young animals

than human creatures. Some are crying and sending forth piteous petitions with their little half-quenched voices; others, silent, lying like dead things; others, listless and motionless, but with a wolf-like glare of hunger in their sunken eyes, giving terrible evidence of the fierce pangs which gnaw within them. Blear-eyed girls and filthy boys carried things like starved cats in their arms, all squalling for bread. Fraser ran the gauntlet of a crowd of spectres of this kind, nearly half a mile long. Most of them were the wives and children of Turcomans from the eastern borders of the Caspian Sea, whose towns had been sacked by the Meschidees. The able-bodied men and women had been sold as slaves, and the old people and children thus left to beg or starve. As many as 3000 to 4000 persons have been brought into Meschid at one time, and the feeble left to the tender mercies of pilgrims and strangers.

Cholera is always carried from Meschid to Astrabad, on the east coast of the Caspian Sea, by merchants and pilgrims, and then forwarded up to Astrakan. It is also conveyed from Meschid to Teheran, the capital of Persia, situated only 70 miles south of the lower border of the Caspian Sea.

TEHERAN is one of the most important centres for the reception and distribution of cholera. The disease not only reaches it from Meschid and the east, but also comes up from the Persian Gulf, by way of Bushire, Shiraz, and Ispahan. Although Teheran has 80,000 inhabitants, no city in Persia makes so poor an appearance on first approach. There is not a dome or minaret of any size to decorate it; nor is it surrounded by woods and gardens, like Damascus. All that meets the eye is a line of mud walls and bastions, surrounded by many ruins, in the midst of a gravelly plain bounded by rugged mountains. The streets are narrow, unpaved, and exceedingly filthy. The bazaars are extensive, but wretchedly kept and very dirty; and the climate is so unhealthy in the summer, that the greater part of the inhabitants are obliged to leave the city.

From Teheran, cholera is always carried due north to RESHDT, at the foot of the Caspian Sea, whence it is distributed to every port on the west coast of the Caspian, *viz.*, Leucoran,

Saljan, Baku, Derbent, Kisliar, and Astrakan. It also passes up all the rivers which empty into the Caspian, and thus invades the whole country between the Caspian and Black Seas.

From Teheran, the disease is always carried north-west, to Kasbin and the great city of Tabriz.

TABRIZ has 80,000 inhabitants, and is the most important city, in a commercial point of view, in all Persia, for it is the great mart of European merchandise. The transit trade to and from Persia is immense, almost beyond calculation; and it is the grand depot into which Russia, Germany, Turkey, and England pour the fruits of their industry and enterprise, to be distributed to the vast regions beyond. Its bazaars and caravansaries are numerous and extensive, built of brick and lime, finely arched, and among the most durable structures in the world. But its streets are narrow, crooked, irregular, only partially paved, and very sombre, for no windows open from the houses towards the streets, which present nothing to the eye but a dull line of mud walls, eight to fifteen feet high, pierced by gates and doors so low that one must stoop to enter them. But the houses of the rich are beautifully finished inside, and have fountains in their beautiful court-yards surrounded by trees and shrubs and filled with singing birds. Even the poorer houses have open rills and running streams in their yards, conducted there from the larger canals. The climate is delightfully healthy; warm by day, but deliciously cool at night, when a strong breeze blows diurnally from the Caspian. It is elevated 4000 feet above the level of the sea, and looks down from the head of a vast amphitheatre upon a fertile plain, 30 miles wide. Scarcely a cloud appears in the clear atmosphere from early spring till late in the autumn, and the whole neighborhood is so healthy that the name of Tabriz is derived from *Tab* (fever) and *reektan* (dispersing); yet, cholera is always conveyed to it from Teheran. It appeared there in 1823; again, in 1828 and 1829, and killed 5000 persons; in August and September, 1845, it is said to have killed 400 in one day; and every successive pandemic has reached it, by means of merchants, travelers, and pilgrims, going to and from Meschid and Mecca.

From Tabriz, cholera is always carried due north, through Erivan to TIFLIS, and thence up to Astrakan, on the Caspian; and also north-west, to Erzeroum, and from thence to TREBIZOND, on the Black Sea.

ERZEROUM, to the north-west of Tabriz, is one of the oldest cities in the world. It is situated at the base of the Ararat range of mountains, at the head-waters of the Euphrates, and claims to have been founded by a grandson of Noah. Its trade is immense, as it is situated felicitously for the transit of goods from Europe, Asia Minor, Syria, Persia, Turkey, and Russia. Almost weekly, a commercial caravan starts for Tabriz, consisting of from 300 to 900 horses, laden with English, German, and Russian goods, along a road laid out by the ancient Genoese, and still marked by the ruins of their forts.

A caravan of horses generally starts at 2 A.M. The guide, or Karavan Baschi, gives the signal by a peculiar cry, and the horses respond by a general snorting, neighing, and tinkling of the bells on their necks. Notwithstanding the thick darkness of the night, such is their intelligence that each horse soon finds his owner or driver, and stands motionless until the pack-saddles and bales of goods are duly balanced and fastened on its back; then starts off on his own accord, finds his proper place in the train, in files two abreast. The oldest and most experienced horse takes the lead, proud of the distinction, tossing his larger string of bells, of which every fifth or sixth horse has a smaller one, the tones of which are cheerful, if somewhat monotonous. Thus they wend their patient way, under their huge burdens, stretching in files of miles in length, over hills and through valleys, never straying or shying, and displaying an instinct, almost amounting to reason, in overcoming obstacles, and never attempting to cross a stream until the proper ford has been indicated to them. In winter they are obliged to push on from 20 to 25 miles a day, to reach shelter; but in summer, they find abundance of forage, and travel more leisurely. This may not be the sublimity of commerce, but it forms a pleasant scene. The muleteers are good Mohammedans, who never seek retirement for their prayers, but commence at

the moment prescribed. Wherever they may be on the road, they tumble off their horses, face towards Mecca, commence their prayers, then rise and ride on quickly to overtake the train, give a few directions, mingled with more curses, to their underlings; dismount again to resume their devotions, repeating this process, interlarded with many blows upon their horses, until the customary prayer is all completed. Quip, crank, laugh, and roundelay pass along the line all the march, and at night, in summer, the merry muleteer sleeps upon the bare earth. In the winter, they crowd into huge sheds, the front part of which is used as a stable, the rear as a hotel. These dirty holes have platforms raised 2½ feet above the mud floor, to enable the guests to keep out of the litter and dung which carpet the floors of these elegant refectories. All the platforms are covered with mats, decayed through age and filth, and equally old and dirty mattresses and pillows. Upon these, the travelers sleep in their wet cloaks and dirty boots, forming a loathsome combination.

From Erzeroum, cholera is always carried to TREBIZOND by caravans, in which 26,000 horses were employed in 1834, some merchants using from 500 to 1000, each carrying 300 pounds. Several times a week one of these cavalcades arrives, pouring itself into some of the huge caravansaries, and depositing its heavy loads of Persian and other goods in huge piles, almost like small mountains. And quite as often, equally large trains set out for Erzeroum. The scenic effects of the town are very great in every direction, whether we look up at it from the sea, or down upon it from the lofty hills behind and observe the Black Sea, the city and surrounding country spread out in a picture of almost unequalled beauty and grandeur. The view extends along a broken line of coast, from whence rise lofty mountains, piled one upon another, until they reach the snow. Although the streets are exceedingly narrow, crooked, and filthy, like those of all Eastern towns, yet they have charms peculiar to Trebizond; for, in riding along, one often suddenly emerges upon one of many romantic bridges which span deep ravines, at the bottom of which tiny rivulets run down to

the sea, and the precipitous sides of which are covered with dense foliage and vines which cling to lofty trees and clamber up to overrun the walls of castles perched upon their dizzy brinks.

From Trebizond, which is almost the only port at the south-east end of the Black Sea, cholera is regularly carried by sailing and steam vessels to Constantinople, Sebastopol, and Odessa, and also up the Sea of Azof to the mouth of the River Don.

To return to Tabriz: we have already seen that cholera is always carried up between the Black and Caspian Seas to Erivan and Tiflis; and from Tiflis to Astrakan on the Caspian, and the towns of Azof, Tagonrog, and Tcherhask on the Sea of Azof, and thence distributed up into Russia. This is now so well known that it requires no proof. But we must give a description of the *houses* in Persia, Armenia, Georgia, and Circassia, which will account for much of the terrible ravages which cholera always commits when it reaches these countries. The structures are still made and the people live exactly in the manner described by Xenophon, who traversed this country and embarked at Trebizond with the immortal 10,000. In the summer-time, in riding along, one often finds one's self on the top of hillocks covered with grass, upon which cattle are grazing; but smoke, issuing from piles of stones a few feet high, makes one suspect that he is riding on the tops of houses and over a village; and soon, from holes in the ground, like rabbits from their burrows, men, women, children, and dogs rush up in abundance. Then one descends into a yawning cavern and dark gulf, filled with smoke, dust, glare of torches, uproar of lowing and bleating beasts, crying children, crowing cocks, and gabbling women, until one believes that he has got into a modern Noah's ark anchored in the ground. The place is dark as pitch, even at noonday, and the bewildered stranger is led along, continually slipping in fresh cow-dung. These vaults sometimes cover an acre of ground, and are divided into an interminable number of rooms and cellars. A multitude of cows and calves often stream out unexpectedly from some side room, and nearly upset and suffocate one in the ocean of their filth. Sheep are herded in other nooks, and lambs trot all

about and into the women's apartments. The horses are stabled more carefully, and a collection of unlovely women and children occupy separate apartments, into which only dirty men, a few lambs and calves, various chickens, or a favorite filly, occasionally intrude. Old men are found sitting about, with long white beards like those of the shepherds of Lot and Abraham. Fraser and Fisher, who often lodged in these places, were generally obliged to turn out some favorite horse or pet cow, in order to obtain sleeping room; the ground was then swept over, and dirty rugs were placed for them to sleep upon. Occasionally, a big he-goat would bound into their sanctum, with a loud ba-a; and above their heads were generally perched a whole brood of roosters, of all ages and all voices; some with colds and sore throats, but all eager to display their vocal accomplishments, in one unremitting crow. From midnight to daybreak, the challenge often flew from roost to roost, and every few minutes a full chorus was struck up. The smell, heat, and noises of the animals were intolerable, and the vermin active; yet, from three to five generations of human beings always live, cook, eat, and sleep in these foul holes. They are made by digging a tank in the ground, lined with rough stones for walls, covered overhead with huge timbers, and these again with sticks, bushes, and dry grass; then terraced over with a thick bed of earth, upon which sods and grass are planted.

Medical College of Alabama.—The friends of this college will be glad to learn that it has been reöpened. We quote from the circular received: "The Faculty has been reörganized and a full corps of professors are ready to devote their time and energies to the cause of medical education in the South." "The professors are all Southern men, born and nurtured on the soil of the South, and now, in the hour of her adversity, they are willing and anxious to do all in their power to raise her to that high destiny which no reverse of fortune or of war can snatch from her sorely tried and faithful sons." Terms: $140 for the session; demonstrator's ticket, $10; matriculation, $5; graduation, $30. Handsome premiums are offered for excellence in various branches. The circular is closed with an appeal to all, for encouragement and support.

ARTICLE XXXI.

REPORT ON THE PATHOLOGY AND TREATMENT OF EPIDEMIC CHOLERA.

BY N. S. DAVIS, M.D., Professor of Practical and Clinical Medicine, in Chicago Medical College.

Presented to the Illinois State Medical Society, May, 1868.

At the annual meeting of the Illinois State Medical Society for 1867, the writer was appointed a Special Committee to report at this meeting on the causes, pathology, and *treatment* of that much dreaded scourge called, variously, Epidemic, Spasmodic, and Asiatic Cholera. But few subjects could be selected from the whole field of Therapeutics and Practical Medicine concerning which a greater diversity of views have been presented and acted upon, or concerning which the professional mind is more unsettled, than the one now under consideration. In the following report no attempt will be made to criticise the views of others, or to reconcile the apparently conflicting statements found in our medical literature. On the contrary, it will be limited mostly to a plain statement of the writer's own views of the treatment of cholera, as derived from direct observation at the bedside of cholera patients.

My opportunities for observation commenced in the summer of 1849, during the severe epidemic which prevailed at that time in the city of New York, and were continued in Chicago during the epidemics of 1850–51–52–54 and '66. To occupy the whole field of investigation assigned to me by the Society would require the writing of a volume rather than a report suitable for reading to a Society like this. And, inasmuch as the causes of cholera are still a subject of active investigation, they will be alluded to simply in this paper.

The essential cause of cholera, or the specific cholera poison (if such an agent exists), is still involved in mystery. The most popular theory at the present time is, that it consists of a highly poisonous organic body, developed in the gastric and intestinal evacuations of patients laboring under cholera, and

capable of being transported from place to place by such evacuations, either freshly voided, or by adhering to clothing, or by diffusion in the soil (Pettenhoffer), when there is a water-bearing stratum near the surface. Some observers have claimed to discover the specific poison in the cholera dejections, by the aid of the microscope. That such dejections contain an abundance of animalcules when voided, and that an abundant crop of vegetable fungi or sporules appear in the same discharges when allowed to stand from two to five days in a temperature above 60° Fahrenheit, is unquestionably true.

I have made quite a number of microscopic examinations of the discharges from the bowels, both from patients laboring under ordinary serous diarrhœa and epidemic cholera. In all of them, when examined soon after having been voided, animalcules were abundant, especially those called *vibriones;* and in the samples taken from two well-marked cases of cholera, besides the ordinary vibriones, there appeared two or three animalcules of larger size, more caudate, and moving across the field with great activity. After the discharges had been allowed to stand from two to five days, fungoid growths appeared in abundance, that were not present when first voided.

These are not presented as specimens of the specific cholera poison. On the contrary, so far as my examinations have been extended, they lead rather to the conclusion that these products may be found in all serous discharges from the alimentary mucous membrane, whether in cholera, cholera morbus, or simple diarrhœa. But if the untiring scientific researches of the profession have not yet fully identified some *materies morbi* as the specific cause and propagation of epidemic cholera, they have done what is of equal or greater practical value, namely, pointed out the meteorological and sanitary conditions favorable to its development and fatality. Meteorologically, these conditions are, a warm, damp, still atmosphere, with deficiency in free electricity and ozone. But with these must coëxist such local sanitary conditions as are capable of furnishing either animal or vegetable miasms, or both combined. Hence the disease has always been most prevalent and fatal where human beings were

most crowded together, with the least attention to ventilation and cleanliness, whether in caravans of pilgrims, in emigrant ships, or the low and uncleanly parts of cities. And, whenever invading country districts, it has chosen the alluvial valleys and malarial districts, and wholly passed by the more rugged and primitive geological districts. The truth and value of these observations are both illustrated by a close study of the rise, progress, and decline of an epidemic of cholera in any of our populous cities. For instance, here are two maps, one of Chicago and the other of New York, on which are indicated the districts most infected with cholera in the summer of 1866.

1866. In 7th Ward, 1 case to 100 population.
14th " 1 " 95 "
1st, 2d, 8th, 9th " 1 " 250 "
$\frac{1}{3}$ of whole number of cases in 7th, 14th, and 16th Wards.

1867. August and September.
1st, 2d, 3d, 9th, 10th Wards, 63,000, 1 death in 335.
5th, 6th, 7th, 13th, 14th " 69,000, 1 " 125.

Pathology.—My views of the pathology of cholera can be stated in a few words, as follows:

A direct diminution of that elementary property of living, organized matter, which I call vital affinity, coupled with impaired contractility, or partial paralysis of the capillary vascular system, or, more properly, of the arterioles, and special morbid sensibility of the mucous membrane of the alimentary canal. The coëxistence of these pathological conditions causes, first, diminution of organic changes, and consequent diminution of secretion and calorification, with a sense of weakness and lassitude, accompanied by pallor, intestinal commotion, and occasional thin stools, constituting what has been called cholerine, or the first stage of epidemic cholera. Second: Still further diminution of secretion and calorification, with complete relaxation, or paralysis of the arterioles, which, coöperating with the morbid sensibility of the mucous tissues, causes a rapid exudation or exosmose of the serous and saline elements of the blood from their capillaries, and their rapid ejection by vomiting and purg-

ing, constituting the second or active stage of the disease. Third: The entire suspension of organic changes, including secretion and calorification, with such exhaustion of the watery and saline elements of the blood, as leaves the whole mass viscid and unoxygenated, constituting the stage of collapse.

After much clinical study and observation, during repeated epidemics of cholera, it has seemed to me that the foregoing essential pathological conditions most fully explain both the symptoms during life, and the *post mortem* appearance after death. Whether they arise from the introduction into the blood of some specific *materies morbi* capable of propagation and transportation, or from the influence of some special combination of atmospheric and sanitary conditions, remains for future investigations to determine.

Treatment.—The pathological conditions stated, not only afford a satisfactory explanation of the symptoms and results of cholera, but they equally afford clear indications for a rational mode of treatment. These indications are: 1st. To increase vital affinity and vascular contractility, and diminish the morbid sensibility of the stomach and bowels, thereby preventing the development of the second stage of the disease. 2d. To add to the first indication such measures as will most speedily arrest the rapidly exhausting discharges that characterize the second stage; and 3d. To add to both the foregoing such means as will be most efficient in supplying the lost elements of the blood, renewing the sensibility of that portion of the organic nervous system called vaso-motor, and promoting the decarbonization of the blood. If we were certain that the disease was produced by the introduction into the system of some specific *materies morbi*, of course there would be an indication for treatment, of prior and paramount importance to all those just enumerated, namely, to administer some remedy which would be capable of directly neutralizing or expelling the specific poison. But as we neither know the nature of the supposed poison nor its antidotes, we must pass this item by for the present, and confine our attention to the consideration of such

means as we deem best calculated to fulfil the several indications previously stated.

In doing this, we shall adhere rigidly to the purpose announced at the commencement of this article. To fulfil the indications presented in the first stage of cholera, three things are of paramount importance, *viz.:* rest, pure air, and such medicine as will produce a decided tonic and mildly anodyne influence. By tonics here I do not mean nervous exhilarants, or what are popularly styled diffusible stimulants, but such medicines as produce an increase of vital affinity and consequent tonicity of the tissues. I require the patient to maintain the recumbent position, restrict his diet mostly to milk porridge (boiled milk and wheaten flour), ventilate the room freely, and if the air is damp and impure, increase the ozone by either sprinkling a solution of permanganate of potash or allowing the slow oxidation of phosphorus in it, and give some one of the mineral acids, with a small proportion of an opiate. A formula that I use more frequently than any other is as follows:

℞. Aromat. Sulph. Acid, ---- ---------- ℥iij.
Sulph. Magnesia, ---------- ℥iij.
Tinct. Opii, ---------- ℥iij.
Aqua Menth., ---------- ℥iij.

Mix, and give a teaspoonful, in sweetened water, every two, three or four hours, according to the severity of the symptoms, until all intestinal commotion ceases, and the evacuations become consistent and natural. A dozen combinations might be named, all calculated to produce similar results, but it would be a waste of your time.

In the second stage, I require the same attention to the atmosphere of the room, and the same position of the patient, with the addition of dry warmth to the extremities and strong mustard sinapisms over the abdomen and nearly the whole length of the spine. But now the whole mucous surface, instead of continuing its natural function of *absorption*, has reversed its action, and is rapidly discharging the serum and salts of the blood, with more or less detachment of its own epithelium, as shown by the copious and frequent discharges up and down.

To arrest this process I rely mainly on the following:

℞. Sulph. Morph.,---------- 3grs.
Calomel, ----------12grs.
White Sugar,---------- ʒj.

Mix, and divide into 12 powders, one of which is given *immediately* after every turn of vomiting, whether it be once in five or forty minutes. The craving for drink is satisfied as much as possible by small pieces of ice. After every evacuation from the bowels, I direct to be thrown into the rectum an enema of two ounces of cold water, containing half a grain of sulphate morphia, and 10 grains of acetate of lead. If the cramps are very severe, a moderate dose of morphia may be injected hypodermically with advantage. But sufficient caution should be used to avoid *narcotizing* the patient. In using the powders and enemas just mentioned, it is of very great importance to note the manner of their administration. They should be given *immediately after* every evacuation. The act of vomiting is one that cannot be performed continuously; and medicine swallowed just as soon as the effort ceases, and the patient inclines to turn his head down to rest, will remain in contact with the mucous membrane long enough to make some impression before the muscular structures have regained the power to renew the act of vomiting.

But if the physician yield to the inclinations of the patient and nurse to let him rest a *few minutes*, or, as they often express it, "to let his stomach get settled a little," a fresh supply of serous fluid will have accumulated in the stomach, and the muscular fibres are again ready to act, and now the medicine is no sooner swallowed than it is returned by vomiting, and no advantage is gained. The rule to which I call your attention so strongly is applicable to the administration of all medicines or restoratives during the active stage of vomiting. When the vomiting is so far checked as to admit of half or three-quarters of an hour between the paroxysms, I begin to administer restoratives in the form of animal broth, well salted either with common salt or chlorate potassa, and strong coffee; the first to nourish and supply the lost elements of the blood, and the sec-

ond, to sustain the wakefulness and activity of the nervous centres. They must be given at first in only dessert-spoonful doses, but may be increased, if found to be retained by the stomach. If the active progress of the disease is arrested during the early part of the second stage, before great exhaustion has been induced, the remainder of the treatment may be such as we have indicated as applicable to the first stage. But if the discharges have continued until the surface is much shrunken, the pulse very feeble, the urine and other secretions suspended, so soon as the discharges are slightly checked we must not only resort to the cautious but diligent use of the restoratives already mentioned, but remedies to sustain the sensibility of the vaso-nervous system, and consequently secretion, must be resorted to. Of these, probably strychnia is the most reliable. A sugar-coated granule, containing $\frac{1}{32}$ of a grain, may be given every half hour or hour, according to the urgency of symptoms, until some effect is induced. Or, if the stomach will retain it, a teaspoonful of the following formula may be given, in a tablespoonful of water, just as often, *viz.:*

℞. Tinct. Cinnamon,---------- ℥j.
Nitrous Ether, ---------- ℥ij.
Tinct. Nux Vom., ---------- ℥j. Mix.

This has the advantage of being more diuretic, but its greater bulk and pungency renders it more liable to be rejected. If the patient passes into full collapse, the judicious administration of dilute mucilaginous solutions of non-purgative salts, milk, animal broth, and strychnia, with a continuance of dry warmth externally and free ventilation, will afford the best chance of recovery; but the majority of patients in this stage prove insensible to any and every kind of treatment. If the cholera attack is arrested at any stage, and the patient passes into a slow consecutive fever, it must be treated on the same principles as the ordinary enteric typhoid fever. I have thus endeavored to give you, in the shortest possible space, the principles which govern my treatment of epidemic cholera, and some of the medicines and formulæ on which I most rely.

I have used a great variety of remedies in the second or ac-

tive stage of this disease. I have seen a few cases promptly arrested by the internal use of chloroform, in doses of 10 drops every 20 minutes, and a larger number by the combination of chloroform, Cannabis Indica and morphine, called *chlorodyne.* I have treated some with salines—some with salt and mustard emetics—have bled some from the arm, and cupped others both over the spine and epigastrium; and have seen several treated with purgatives, mercurial, saline, and oleaginous. And I have seen some patients recover under all these kinds of treatment, and have seen a larger number recover under no treatment at all, except rest and diluent drinks. The special mode of managing cholera recommended in this paper I was led to adopt during the epidemics of 1849 and 1850, and through all my subsequent experience it has been with me far more successful than any other plan that I have tried, or seen tried by others.

I think the most *fatal* of all the methods of treating cholera that have yet been practised is that which relies mainly on opiates and alcoholic inebriants. In conclusion, I would make one suggestion. It is now very generally considered that sulphate of iron and permanganate of potassa are the most reliable disinfectants for rendering innoxious the dejections of cholera. If there is any truth in the theory that cholera is caused by a specific poison, derived from cholera dejections, would not the early and persistent internal administration of sulphate of iron neutralize the poison in the system, and arrest the disease? Has it or the sulphites been tried?

A few pages might be added on paphylaxis, but I have already trespassed on your patience too far.

ARTICLE XXXII.

NEW METHODS OF TREATING URETHRAL DISEASES.

By J. S. SHERMAN, M.D., Chicago.

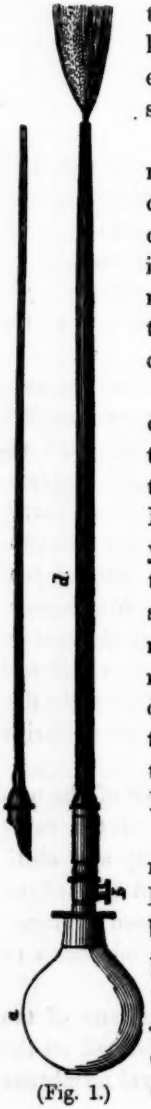
The frequent failure of the ordinary treatment pursued in urethral inflammations and the continuance of many blennorrhœas, not only for months, but of years, has shown the insufficiency of the old methods. There is in these diseases, as in all others, a strong tendency to spontaneous recovery; yet there are several satisfactory reasons why inflammations of the urethra so often resist treatment:

1st. The disease is in a position where it is difficult to make the necessary local applications. The attempt to accomplish this by means of injections is very insufficient; the fluid remains but a short time in contact with the diseased surfaces, and it is seldom that the patient or surgeon succeeds in carrying it more than one-half the depth of the canal, the accelerator urinæ muscle preventing its further progress. The internal administration of copaiba, cubebs, and the terebinthinate preparations, with the hope of influencing the disease by the contact of urine impregnated with these remedies, is so often followed by severe gastric disturbance, that the patient prefers the disease to the treatment; and in the chronic cases of urethritis these remedies are useless.

2d. The constant contact of the inflamed walls of the urethra, bathed in specific pus, is not only a cause of the rapid extension of the malady, but also of its pertinacity and obstinacy. The poison is ever present in the pus, and the inflammation aggravated by the contact of the diseased surfaces. These conditions are certainly not overcome by injections or internal administration of drugs.

3d. There is a tendency in the mucous membrane of the urethra to develop granulations similar to those formed on the eyelids. The histological character of the urethral membrane

is very similar to the conjunctiva of the eye, and gonorrhœal inflammations of these tissues frequently terminate in granulations. This fact was first discovered and made known by M. Desormeaux, who, by the aid of his endoscope, was enabled to demonstrate them in some cases.



(Fig. 1.)

From these conditions, the indications for treatment are plain: the destruction of the specific character of the pus, and complete separation from contact of the diseased surfaces, being the most important. Astringent effect is valuable in diminishing vascularity; yet if the first two indications are successfully met, the vascularity and consequent production of pus will rapidly subside.

For the means and manner of applying remedies directly to the urethra, in such a way that they remain long in contact with every portion of the canal, we are indebted to the ingenuity of M. Mallez. His special attention has for several years been devoted to genito-urinary diseases, and the results of his study are given to the profession in the first volume of his "Album d'Anatomie Pathologique," containing photographic representations of these diseases, taken directly from dissections. From personal observation of cases treated by him, I have no hesitation in saying that better results are obtained by his mode than I have seen follow any other plan.

(Fig. 1.) represents an instrument for applying remedies, in the form of powders, to the urethra. It consists of the following parts: *a*, a small rubber sack, terminating in a metal tube, which is provided with a valve at the point *b* opening inwards and allowing air to enter, but closing when the sack is compressed; *c*, a scoop, which is received in the larger tube and terminates in a small elastic catheter; *d*, a large elastic catheter, into

which the smaller one is easily passed, leaving a space between the two. The larger should project somewhat beyond the smaller. It is thus used: The large catheter is first introduced into the urethra, beyond the point of disease, and being elastic, it can be passed into the prostatic portion if necessary. The secretions which have accumulated in the tube are removed with a pledget of cotton. The powder to be applied is then placed in the scoop, and connected with the sack. The small catheter is passed into the larger one and the sack compressed. This carries a current of air through the instrument, and with it the powder, which is deposited on the mucous membrane, at its termination. If the instrument be slowly removed, at the same time that the insufflations are made, the whole interior of the canal will receive a coating of the powder, and portions which could not be reached with injections will be effectually acted upon. The powders must be blown with considerable force, in order that they may impinge strongly on the mucous surface.

The remedies used must be finely powdered, and will vary according to circumstances. The sub. nit. bismuth is very valuable, and often of itself proves sufficient. It adheres firmly to the membrane, and forms a coating which effectually separates the diseased surfaces. The following will be found applicable to a majority of cases:

℞. Potas. Permanganate, ---------- gr. j.
Quiniæ Tannate,---------- gr. vj.
Bismuth Sub. Nit.,---------- ℥ij.

M. S. Use as an insufflation, once daily.

Various other remedies may be used, as tannin, sulph. copper, zinc, etc. The only caution necessary is, that the powders be not used too strong. When the disease is produced by stricture, dilation offers the only chance of cure.

Remedies which cannot be used in the form of powders, may be applied as ointments, by means of the spiral (Fig. 2.) bougie, shown in (Fig. 2.) It is made of wax, and has the sur-

face marked with a spiral groove, into which the ointment to be used is placed.

The local application of carbonic acid gas to the urethra and interior of the bladder is a valuable means of allaying morbid sensibility. Spermatorrhœa, when accompanied with tenderness in the vicinity of the ejaculatory ducts, is frequently rapidly benefited by its use. It is a powerful sedative to mucous membranes. Its reputation in gastric irritation is well established, and it can be applied to the urethra and bladder effectually and with great benefit. In vesical catarrh it will be found a valuable remedy.

A simple way of using it is to collect the gas in a rubber sack, to which is attached a tube that can be introduced into the bladder. The gas is then forced in by pressure. Care must be taken that we do not distend the organ beyond proper limits. The same principles of treatment are applicable in vaginal diseases of the female.

Powdered substances have, in the manner described, been applied to the dead subject, and dissection has shown the urethra completely covered with the substance, proving the thoroughness of the application.

Acute cases are very promptly cured, and the discharge is often immediately arrested. The old and chronic ones, which have lasted for years, require time, varying from three to six weeks.

ARTICLE XXXIII.

"POSITION" IN THE TREATMENT OF CHLOROFORM POISONING.—CARBOLIC ACID IN THE TREATMENT OF CONJUNCTIVITIS.

By E. L. HOLMES, M.D., Lecturer on Diseases of the Eye and Ear in Rush Med. Col., and Surgeon to the Chicago Charitable Eye and Ear Infirmary.

The subject of anæsthetics does not fall specially within the province of your Committee on Ophthalmology; and yet, there are a few points, which I consider of some interest in connec-

tion with the administration of ether and chloroform in ophthalmic surgery.

I have observed a few facts, in operating upon the eye, which I deem of very great importance, as bearing upon the treatment of patients presenting alarming symptoms during the inhalation of chloroform. It is not my object to discuss the comparative danger in the use of chloroform or ether, nor the circumstances upon which the danger depends. It has been my fortune to observe the administration of both agents in a very large number of cases, under the care of many different and eminent surgeons. I have also administered chloroform more than 400 times myself. Till quite recently, I had never witnessed a single case in which there was any apparent danger to the patient.

Some time since, two male adult patients, to whom I administered chloroform, suddenly ceased breathing, the pulse at the wrist becoming at once imperceptible, the sound of the heart, however, being audible to the ear placed upon the chest. The removal of the chloroform, alternate pressure and relaxation of the chest, and cold water thrown upon the face, speedily aroused the action of the heart and lungs.

I may state that in administering ether to a patient 76 years of age, the respiration suddenly ceased, although the pulse, very much reduced in force, continued. The appearance of the patient was alarming, the countenance being somewhat livid, cool, and haggard in expression, and the eyes rolled upward. It required considerable exertion to restore the patient.

Every surgeon has, not unfrequently, observed that chloroform produces considerable pallor, prostration in the action of the heart, arteries, and lungs, apparently without any imminent danger. In all such cases, as well as in the two just described, the danger seems to depend entirely upon syncope. I have never witnessed a case in which there was turgidity of the vessels and redness of the face, in which there was not also a regular pulse, and a regular, though often stertorous, respiration, causing, perhaps, a peculiar heaving motion of the head. On

several occasions, as I observed this tendency to syncope, although I saw no reason for alarm, I directed, experimentally, my assistants to raise the foot of the table sufficiently high to place the patient with the head downward on an inclined plane of at least 40°. I found, invariably, that the pulse at once became fuller and more frequent, and that the color returned to the face.

Subsequently, in administering chloroform to a patient at the Chicago Charitable Eye and Ear Infirmary, the breathing and pulse, almost without warning, suddenly ceased. Although the pulse and respiration had been quite good, there still had begun to be a peculiar "cold perspiration" upon the brow, and a cold, moist condition of the hands, which I attributed to the depressing influence of fear, under which the patient was laboring. I was watching the patient most carefully, thinking in this condition he should receive no more chloroform, when he ceased to breathe. His aspect was most appalling; the face and hands were cold and wet, the features pinched, muscles of the face relaxed, lids half opened, and the cornea turned upward. The foot of the table had not been raised 15 seconds, the tongue having at once been withdrawn, before the pulse reappeared at the wrist and the respiration was reëstablished. Upon restoring the patient to the horizontal position, the pulse and respiration again ceased. The elevation of the foot of the table, however, again reëstablished the action of the heart and lungs.

Some time after this occurrence, precisely the same symptoms appeared during the inhalation of chloroform. The patient was a young, strong man. In this case the pulse, for a few minutes, was growing less frequent, although the breathing continued quite strong and regular, till, without further warning, the pulse and breathing suddenly ceased. The appearance of this patient was as frightful as in the case of the other, just described. A similar mode of treatment restored, at once, the action of the heart, some seconds passing before the respiration was fully reëstablished.

I have had an opportunity, at the Infirmary, of demonstrat-

ing, experimentally, to students and physicians, more than thirty times, in cases where there was no apparent danger, and yet where there was a tendency to pallor and weakness of the pulse, that, in the position I have described, the cheeks became instantly flushed and the pulse stronger.

In administering chloroform, I always use a napkin, folded several times, upon which the anæsthetic is poured in small quantities at a time, care being taken that a free current of air can pass to the mouth under the napkin. The patients are always in a horizontal position. I watch, with great care, the condition of the pulse and respiration; and yet, it is sometimes somewhat difficult to distinguish the difference between the effects of fear and those of the chloroform.

Whatever may be the obscure causes of fatal results from the use of chloroform, I believe the danger, in by far the larger proportion of cases, depends upon a tendency to death by syncope. To overcome this tendency, it is necessary to stimulate the nervous centres. This may be done by causing a column of blood to press upon the vessels of the brain. It is not sufficient to remove the pillow from the head and place it under the hips. It is necessary that the whole body be placed upon a steep, inclined plane, to force as much blood as possible, by gravitation, into the brain. I believe this is of more importance than any of the methods usually described by writers on the subject. It should take precedence to the withdrawal of the tongue, artificial respiration, galvanism, or stimulants. This remedy can always be applied without delay, and can be followed by any others which may seem desirable.

I have dwelt upon this subject of position, because so little is said upon it, either in the best works upon anæsthetics, or in the reports of the treatment in fatal cases, as found in medical journals. We have reason to believe that very few surgeons or obstetricians have ever placed a patient in the position described, in cases which threaten to terminate fatally.

I have employed large and frequent doses of bromide of potash, as recommended by Dr. Stone, both before and after the administration of ether, as also of chloroform, to prevent nau-

sea, but have not observed any beneficial result. It is highly desirable to possess some agent to prevent nausea and vomiting, especially in the extraction of cataract, since the vomiting may cause the expulsion of the vitreous humor, and protracted nausea, and consequent loss of appetite, may prevent union of the corneal wound, by impairing nutrition.

CARBOLIC ACID IN THE TREATMENT OF CONJUNCTIVITIS.

The valuable properties of carbolic acid, as an application in diseases of the throat and gums, has been shown by dentists, and physicians who give special attention to diseases of the throat. The good results of its use in these diseases, induced me to try it in diseases of the conjunctiva. I have found in about a dozen cases, at the Infirmary, both of acute and, especially, of chronic inflammation, that the patients made a good recovery under its use.

It is doubtful whether it possesses any advantage over the ordinary astringents, and yet it may be a desirable agent in cases where the usual applications fail. In two cases of purulent conjunctivitis, its use between the applications of nitrate of silver, after the latter had been tried two days, seemed to rapidly overcome the excessive discharge of pus. Possibly, its antiseptic properties may aid in destroying any specific poison that may exist.

When applied, in a saturated solution, to the conjunctiva, as also to the mucous membrane of the mouth, it produces an intense burning pain, which almost invariably subsides in a few moments. It produces a thin, white pellicle on the surface where it is applied, which is soon cast off, leaving scarcely any irritation.

ARTICLE XXXIV.

CONCENTRATED REMEDIES.

By F. R. PAYNE, M.D., Marshall, Ill.

Read before the Clark County Medical Society, July 1st, 1868. Published by request of the Association.

It is our purpose in this paper to briefly refer to some of the organic remedies which, by long experience, we have found valuable aids in assisting nature in the removal of disease. It should always be borne in mind by the physician, that nature tends, in a majority of cases, to repair injuries inflicted upon the body, and throw off morbid or deranged conditions of the system. This instinctive power, if properly aided by a judicious and rational system of hygiene, often effects the cure, especially in those of a mild character. If a disease presents itself for treatment it is the duty, and demanded of all honest and honorable physicians, to inquire and satisfy themselves whether or not hygienic means are capable of accomplishing the objects desired; if so, they should always be employed in preference to medicine. We too often ascribe the credit to some remedy, when nature performed the cure.

It is my purpose, on this occasion, to present some remedial agents which we regard as worthy of favorable consideration.

ACONITIN.

This is derived from the *Aconitum Napellus*, or wolfsbane, and is contained in both the leaves and roots. It has three principles: resin, neutral, and alkaloid. Its properties are diaphoretic, diuretic, alterative, antispasmodic, and narcotic; consequently we can, with at least a fair prospect of benefit, employ it in the treatment of phthisis, dropsy, gout, rheumatism, and nearly all forms of nervous disorder.

When given in small and repeated doses, it excites diaphoresis and diuresis, and increases many of the secretions. Its continued use for a long time may produce exanthematic eruptions and itching, and, frequently, pain in the joints. In overdoses, it will produce paralysis of the tongue and pharynx, suffoca-

tion, vomiting, diarrhœa, convulsions, and death. The dynamical effects of this remedy show conclusively that it is a stimulant to the nervous system.

These physiological influences of aconitin make it a valuable agent in arousing peripheric secretions, chronic diseases of the sheaths of muscles, nerves, and tendons.

We have found either aconitin or alcoholic tincture of aconite leaves a valuable arterial sedative; it is in the latter form we usually prescribe the remedy. We have given it with marked benefit in some cases of epilepsy and neuralgia; it is a valuable local remedy in tic-douloureux. The dose of aconitin is from $\frac{1}{24}$ to $\frac{1}{12}$ of a grain, and the tincture 6 to 10 drops every 4 or 6 hours.

XANTHOXYLIN.

This remedy is obtained from the *Xanthoxylum Fraxineum*, or prickly ash. The part used is the bark, and contains a resinoid and neutral principle. Its properties are stimulant, alterative, sialogogue, and, to some extent, tonic. It may be employed in rheumatism, colic, indigestion, paralysis, etc.

We have used this agent extensively, and have great confidence in its value as a remedy in the above diseases. It is true that we generally use it in combination with other appropriate agents. It is a valuable medicine in arousing the activity of the muscular fibres of the stomach and bowels, and excites an increased flow of the gastric and digestive juices, and thus aids in establishing normal action of the mucous surfaces. We are perfectly satisfied, by long experience, that it is a valuable addition, and gives additional permanency to the remedial influences of other tonics and stimulants. The active principle may be given in from 2 to 4 grains.

In combination with fraserin, we have found it valuable in chronic diarrhœa and improving cases of dysentery. We frequently use the bark, but it is much more convenient to have the active principle, provided always we can get that which contains all of the medicinal properties of the bark.

FRASERIN.

This remedial agent is derived from the *Frasera Carolinensis*,

or American colombo. The part used is the root, and it contains, by chemical analysis, a resin, neutral, and muci-resin. The properties of this remedy are, tonic, stimulant, and slightly astringent.

We have employed it with marked benefit in many cases of indigestion, debility, and chronic dysentery; but the mucous membranes seem to be especially benefited by the use of this remedy. We have used it with marked benefit in weakness of the digestive organs, and in all disorders resulting from abnormal action of the digestive apparatus. We frequently administer it in combination with *gentiana ochroleuca*, with decided benefit in all derangements of the digestive apparatus. The dose of the active principle is from 3 to 8 grains, but the powdered root may be administered in from 10 to 30 grains.

PRUNIN.

This medicinal agent is found in nearly all parts of the United States. The prunin is obtained from the *Prunus Virginiana*, or wild cherry. The part used is the bark, and it contains a resinoid, neutral, and amygdalin. The properties of this remedy are stimulant, tonic, expectorant, and sedative. The seeds of this tree contain prussic acid, and are beneficial in colds, coughs, incipient phthisis, and bronchial affections attended with severe cough.

The prunin may be given with every hope of success in ordinary cases of debility caused by cold and protracted cough. In those cases where there is a tuberculous tendency, bitter tonics are liable to impair the appetite, and thus favor disintegration; but prunin, or even the bark or seed of the wild cherry, may be administered without fear of nauseating the stomach. It contains a peculiar principle that promotes the appetite, strengthens digestion, and quiets spasmodic cough by allaying the irritability of the nervous system. It calms inordinate action of the heart and arterial system. When we cannot conveniently procure the prunin, we recommend the use of the cherry-seed, bruised and put into a sufficient quantity of spirits to preserve them. We have, in some cases where there is constriction of the chest and dyspnœa, found it beneficial to

combine prunin with eupatorin, veratrin, and other antispasmodics and expectorants. The dose of pure prunin is from 2 to 8 grains. It is of vast importance, in using these concentrated remedies, that we procure pure and genuine articles.

HYOSCYAMIN.

This is said to contain all the medicinal virtues of the *Hyoscyamus Niger*, or henbane. Its properties are anodyne, antispasmodic, soporific, narcotic, diuretic, and laxative.

We have frequently used this remedy in neuralgia, pertussis, bronchitis, and all catarrhal and nervous affections. We regard it, in combination with belladonin and podophyllin, as a superior remedy in costiveness, and many forms of female diseases, where the nervous system is implicated. Our usual mode of administration is in a small pill, and we proportion each article according to its properties and physiological effects and the peculiarity of the disease. We have very seldom prescribed this pill without future calls for the same medicine. Great care should be taken in the quantity of atropin.

The various officinal preparations of this plant are often uncertain. When a genuine article is procured, we may confidently expect beneficial results in the treatment of delirium, puerperal insanity, after-pains, cough and dyspnœa, neuralgia, rheumatism, irritable ulcers, and hemorrhoids. In hyperæsthesis of the nervous system, acute morbid sensibility of the organs of special sense, this remedy will be found invaluable. The dose is ¼ to 1 grain.

ATROPIN.

This is derived from the *Atropia Belladonna*, or deadly nightshade. Its properties are narcotic, anodyne, calmative, antispasmodic, alterative, resolvent, and diuretic. We have employed it in epilepsy, convulsions, scirrhus, pertussis, costiveness, and nervous affections generally, with decided benefit. The dynamical effects of this remedy when given in small doses are, thirst, dryness of the fauces, difficult deglutition, deluded vision. When given in overdoses, alkalies, especially liquor potassæ, is a good antidote.

It seems to be pretty well established that its chief physi-

ological effects and therapeutic use, as an internal remedy, depend upon the decided influence it exerts upon the pneumogastric nerve. If we cannot procure a reliable preparation of atropin, we use the solid extract in from $\frac{1}{6}$ to $\frac{1}{2}$ grain doses; the proper dose of atropin being from $\frac{1}{24}$ to $\frac{1}{12}$ of a grain.

We have no hesitancy in recommending this remedial agent as one of superior value in the diseases above enumerated. The important indications in the employment of this remedy are in the formative stages of organic affections. It has a decided influence in overcoming the abnormal sensibility which produces and accompanies structural change. The use of other stimulating resolvents, not possessing the auxiliary properties of this, would, in all probability, increase the irritation and thus favor structural lesion. We have used it with decided advantage in the prevention of abortion resulting from increased sensibility and contractility of the uterus.

We generally combine it with other appropriate remedial agents. It is a powerful remedy, and should be used with great care, especially in children; and, in fact, when given in large but not poisonous doses to adults, it produces extensive dilatation of the pupils, and alarms the patient. This effect is often produced by the local application of the remedy.

It is my intention, at our future meetings, to continue the presentation of remedies, both organic and mineral, which we have found beneficial in assisting nature in the cure of disease; and we would be pleased to have the members of this Society, at each meeting, give their experience for or against the various remedies now used in practice.

Therapeutics, which means "I cure," is a very important department of our profession, but it is intimately connected with pathology. A thorough knowledge of disease is indispensably necessary if we hope to be successful therapeutists.

ARTICLE XXXV.

NOTES AND OBSERVATIONS IN GENERAL PRACTICE.

By JOHN FORMAN, M.D., of Chicago.

THE CARBO-SULPHITES IN PUERPERAL SEPTICAMÆ.

The following case seems an excellent example of the value of the carbo-sulphites in the treatment of puerperal septicamæ, in the twofold sense of a deoxidizing and catalytic agent.

On the 22d July, I was requested by Dr. Rawson to join him where he was in attendance upon Mrs. C., who was in labor with her sixth child. Dr. R. stated that he had been in attendance four hours, and although labor-pains had continued regular, very frequent, and vigorous during the whole of that time, not the slightest progress had been made. At 1 P.M. I found a polypus protruding from the vagina, and traced its connection to the posterior lip of the *os uteri*. In shape and size it resembled a Jargonelle pear. The *os uteri* was fully dilated and dilatable; membranes intact; head presenting, face to sacrum; occiput tightly wedged, and resting on the *os pubis;* repeated efforts with the hand to relieve it were futile. After waiting three-quarters of an hour, and observing the patient's strength rapidly diminishing, from the pressure of vigorous pains every two minutes, without any progress, applied Prof. Simpson's long forceps, and, after exercising considerable force, succeeded in delivering a large female child. Alarming hemorrhage immediately followed; the placenta was at once removed, the uterus grasped with the hand internally, and ice applied over the pubic region; free bleeding still continued, which was traced to the polypus, which had been lacerated. This was secured and ice-water cloths applied, renewing them at short intervals. In the course of an hour and a-half bleeding entirely ceased, leaving our patient much exhausted, frequently bordering on syncope. Stimulants and ice-water were freely administered. At 6 P.M., she began to rally; pulse small and

quick; skin hot and perspiring; intense thirst; temperature of room 96.° To continue stimulants. Milk and ice.

23d, 8 A.M.—Patient feels very uncomfortable; slept none; has headache, thirst, and skin hot; temperature in axilla 110°; temperature of room 92°; abdomen distended and tympanitic; uterus not contracted, very tender on pressure, particularly over right iliæ; no after-pains; no lochial discharge; fœtor very strong. The uterus was injected with a quart of tepid water, containing a drachm of carbolic acid crystals, and repeated three times a day. A scruple of sulphite of soda, six grains of crystallized carbolic acid, with half a drachm of liquor secali, were ordered every four hours, with stimulants and a nourishing regimen.

Little improvement took place until the evening of the 25th, when uterine discharge appeared, and the pulse and temperature of the skin simultaneously fell. The carbo-sulphite mixture was continued, with a good, nourishing regimen; the deodorizing injection used twice a day, for two days more; when our patient was convalescent.

Remarks.—Although puerperal septicamæ never reached the typhoid stage in this case, the strong probability is, that if the case had been left to nature, or treatment of a less decided character employed, such an unhappy result would have occurred, from the fact of two fruitful sources being present: 1st. A patient exhausted in the extreme after a vigorous, tedious labor, followed with alarming hemorrhage. 2d. The entire absence of *post partem* uterine contraction (no doubt resulting from the double cause of exhaustion, and cold applications used to stem fast-ebbing life), with the sequelæ of decomposing uterine coagula, this in course becoming absorbed and quickly firing the train of deadly puerperal typhoid.

The carbo-sulphites bid fair to become the physician's sheet-anchor in zymosis, as Prof. Lister's dressings are to conservative surgery.

ARTICLE XXXVI.

ON THE CONSERVATION OF FORCE IN DISEASE.

By J. E. HENDRICKS, M.D., Des Moines, Iowa.

The investigations of philosophers, during the last 20 years, have placed the doctrine of the *Conservation of Forces* on so firm a basis that its universality may be considered as *demonstrated.* All physiological and pathological conditions may, therefore, safely be attributed to some prior manifestation of *Force.** A definite amount of force, which is ultimately traceable to ethereal vibrations,† results in the construction of animal tissue. This tissue, besides being an *instrument* through which other forces may be manifested, is itself a force, *exactly* equivalent to the force by which it was produced. The admission of the conservation of forces makes this equivalence *absolutely* necessary.

If, therefore, animal tissue disappears during disease, we *know* that either the tissue has been imperfectly disorganized, and yet represents a portion of the force which disappeared on its organization; or its total equivalent has been manifested in some form, if not in its usual form of "psychical and motor" force, then in the form of *heat*, or some other occult form that has escaped our observation.

It is illogical, therefore, to conclude, when animal tissue is

* Force is comprehensible only as a result or consequence of, and coëxistent with, motion. It is either *active* or *potential.* Animal tissue, when not in a state of retrograde metamorphosis, is a representation of *potential* force. The *motion* here is not apparent, but the persistence of force *necessitates* the continuance, even here, of (molecular) motion.

† That heat is a form of force having a definite mechanical equivalent, has been abundantly demonstrated. And it is now pretty generally believed by the more advanced philosophers, that *heat, light, electricity, magnetism, chemical attraction*, and perhaps *gravitation*, are all "convertible material affections." All these affections, or forms of force, except, perhaps, the latter, are ultimately traceable to *ethereal undulatory motion.* That the latter, or the *attraction of gravitation*, is referable to the same cause, ethereal vibratory motion, although not so obvious, is, nevertheless, highly probable.

disorganized and eliminated in disease without producing the usual amount of mental and motive force, or any observable form of force except *heat*, that the *tissue* was in any respect defective or incapable of conversion, by proper organisms, into a full equivalent of its usual forms of force. To conclude thus, is, in fact, to deny the universality of the conservation of forces.

As the various forms of force manifested by living animal organizations are ultimately traceable, mainly, to that form of force we call heat, the modified forms being the result of organisms, it is, therefore, highly probable, *a priori*, that if those organisms are by any means deranged, the manifestation of force through them would be changed; and, though for a given amount of disintegrated tissue a given amount of force must result, yet in the above supposed condition of the organisms that force may *all* be manifested as heat.

In some diseases, where certain tissues are rapidly dissolved and carried out of the system (as in cholera, for instance), it is probable that but a *partial* retrograde metamorphosis has been effected, and that the tissue, in its dissolved state, contains a considerable portion of the force expended in its organization. This residue of force, in that case, would only be manifested as heat upon *putrefaction* of the fluids after their elimination. It is highly probable, therefore, that in every case of disintegrated tissue, if we could follow it through its successive changes, until complete disorganization is effected, and could measure all the manifestations of force resulting therefrom, we would discover that their *sum* is exactly an equivalent of the force that had been expended in its organization. Any other view of the case is, virtually, a denial of the doctrine of the conservation of forces.

ARTICLE XXXVII.

CLINICAL CASES FROM PRACTICE.

By N. S. DAVIS, M.D., Professor of Practical and Clinical Medicine, in Chicago Medical College.

Vaginismus.—Mrs. H., with her husband, from a distant part of the State, consulted me on the 17th of March, 1868. She stated that she had been married over three years, and, though enjoying fair general health, and feeling the usual sexual desires, had never been able to allow sexual intercourse with her husband, on account of the *terrible* suffering that every attempt had produced.

On attempting to make a vaginal examination with the index finger, it was found necessary to bring her fully under the influence of chloroform before it could be completed. The sphincter at the entrance of the vagina contracted as closely around the finger as the sphincter ani generally does; and without the chloroform, she shrank with terror as the finger separated the labia. Finding no malformation of the parts beyond the entrance of the vagina, except an apparent shortness of the vagina and smallness of the neck of the uterus, she was advised to undergo an operation, such as has been recommended by Dr. J. Marion Sims. This, she and her husband readily assented to; and, on the following day (March 18th), having had the bowels freely moved, so that the rectum should be empty, I proceeded with the operation, assisted by Dr. S. A. McWilliams and two students. The patient was brought into a state of complete anæsthesia by the cautious use of chloroform, and then placed in the same position on the table as for the performance of lithotomy. The labia were separated by the assistants and a portion of the mucous and sub-mucous tissue, corresponding with the original attachments of the hymen, was dissected away with the scissors and forceps, and two incisions were made in the posterior part of the vagina; each commencing about two inches up, one to the right and the other to the left, making them converge into one on the central line poste-

riorly, and then extending as one incision outward to the edge of the perineum. The incisions, when completed, resembled in shape the letter Y, and were deep enough to sever the dense, sub-mucous cellular tissue, and the fibres of the sphincter vagina muscle. The operation was completed by placing a soft sponge in the vagina and removing the patient into her bed. The hemorrhage was inconsiderable, and under the influence of a moderate dose of morphine, the patient rested comfortably for several hours. The next morning the sponge was removed, the vagina washed out with water, a small-sized vaginal dilator inserted, and allowed to remain five minutes. From this time, the dilator was inserted every day during the first week, allowing it to remain from fifteen to thirty minutes. During the second week, one of a larger size was used in the same manner. During the third week, the dilator was introduced only every second day, one of medium size entering the vagina with but little pain or resistance.

On the 15th of April, the treatment was discontinued and the patient permitted to return home. The incisions had entirely healed, and a letter, received from her husband soon after, announced that all serious obstruction to sexual intercourse had been removed. The lady was again in the city, a few days since (Aug. 21st), and assured me that the operation had been entirely successful.

Fissures of the Rectum.—June 6th, 1868, was called to Mrs. L., residing in this city. She was pale, moderately emaciated, nervous system very excitable, appetite impaired, and bowels inclined to constipation. For more than one year she had suffered some from leucorrhœa, and terribly from acute lancinating pain in the anus every time she had a discharge from the bowels. This pain was so acute and protracted after the discharge, that it often induced slight spasms or muscular twitchings, and rendered the patient incapable of leaving her bed for twelve or eighteen hours after each passage. Indeed, the dread of the suffering had induced her to postpone intestinal discharges for eight or ten days at a time.

She had been told, by a previous medical attendant, that the

difficulty was occasioned by a tumor growing in the posterior walls of the uterus or in the recto-vaginal septum. Putting the patient under the influence of chloroform, a careful examination was made, both rectal and vaginal. No tumor was discovered, not even a hemorrhoidal one; but just within the sphincter ani were no less than three well-characterized *fissures*, and a tender, abraded appearance of the mucous membrane over nearly the whole circumference of the anus. An operation for the cure of the fissures was advised and readily assented to.

Accordingly, the following day, the patient was placed on the table, and, after I had put her under the full anæsthetic influence of chloroform, Dr. S. A. McWilliams proceeded to make a free incision through the bottom of each fissure, and, in addition, to stretch, moderately, the fibres of the sphincter ani muscle. The patient was placed in bed, and, as the effects of the anæsthetic passed off, an anodyne was given, sufficient to insure rest for the succeeding few hours. After the first two days the intestinal discharges became regular, and were accompanied by only the slight, smarting pain caused by the incisions. The latter rapidly healed, and there has been no return of the previous suffering. The general health of the patient has also much improved.

The chief object in relating this case, is to illustrate the necessity of making sufficiently careful examinations of patients suffering under chronic maladies, to understand their true nature before the patient suffers months, and sometimes years, from ailments that are easily removed.

Correspondence.

KNOXVILLE, Tenn., July, 1868.

PROF. N. S. DAVIS:

The readers of the EXAMINER may be interested in a brief account of this region of country, lying between the Cumberland and Smoky Mountains. This valley is about 80 miles in

width, and 1000, or more, feet above the level of the sea. The Holston river has its origin in South-west Virginia, and, running about midway of the country between the two mountain ranges, unites with other streams to form the Tennessee. This whole region is hilly, but the soil is capable of being tilled to the summits of the elevations. Knoxville is built upon three hills, on the north bank of the river, and between the elevations run two creeks. The drainage is, consequently, most excellent, and but little water can become stagnant.

From the first settlement of this country, in 1792, until 1834, intermittents were said to have been unknown, except upon the river bottoms. From 1834, this form of disease began to prevail, and culminated, in 1838, in an epidemical form, which proved terribly severe and fatal. From a history of this epidemic, before me, it seems to have been of a type similar to that which was so prevalent the same year in many newly settled localities in the North-western States. "Black vomit occurred in some cases, and many considered themselves in the midst of yellow fever." Since that time, no general epidemic has prevailed to any extent.

From an observation of about ten months, there is every reason to believe that this country is as healthy as Eastern New York, or New England. The weather in winter is mild, the mercury seldom going down to zero. Snow seldom falls more than three inches deep, and melts off in a few days. There being no marshes, paludal influences are unknown. A case of ague is scarcely known. The fevers are generally simple in their character, and remittent in their type. Last winter a great many cases of neuralgia occurred, principally located in the supraorbital region, and generally over one eye; the pain was most severe about noon, and subsided towards night; there was no chill on its accession, and but little fever. Mild alteratives, followed by tonics, soon removed the trouble.

Pneumonia prevailed in February and March, but confined principally to the negroes. From the want of proper shelter and nursing, this affection proved fatal in many instances. The blacks are peculiarly liable to pulmonary disease, and the mu-

lattoes are more so than the full-blooded. Scrofula is often met with, but seems confined to families where defective nutrition, resulting from poverty, is the most obvious cause. The class known as "poor whites" are most affected. Phthisis pulmonalis is not often seen, except in cases where the disease is excited by hereditary influences. Asthma is seldom met with, and those who have been afflicted with that distressing disease find marked relief after a short residence here.

The operation of entire removal of the uterus was performed, some years ago, in this place, by the late Dr. Baker. The subject was a negress, laboring for some time under what was considered ovarian disease, and the operation was commenced for the purpose of removing the diseased organ. On proceeding, after the first incision was made, the entire uterus was found involved, and the operator concluded he would extirpate the whole mass. Recovery was rapid, and the woman is still living here in good health. The morbid specimen is still preserved, and in possession of Dr. Boyd, a student of Dr. Baker.

Dr. James Rodgers, of this city, informs me that he himself removed the uterus, in the case of a negress. The tumor was adherent to the rectum, and an opening had formed between the two organs. The removal of the uterus, consequently, left an opening still in the rectum, which was closed by a stitch, with the hope that union might take place. The case went on favorably for five days, and the external incision had partially united by the first intention, when, from a motion from the bowels occurring, the stitch was torn out, the contents escaped into the abdominal cavity, and death occurred as in perforation.

The Tennessee Asylum for the Education of Deaf Mutes is located here, and has, at present, about 50 inmates. The location is a fine one, and the buildings and grounds are in excellent condition.

Some benevolent person donated, a few years ago, a sum of money, for the purpose of establishing a hospital at this place. There is a large lot and some $2000 or $3000 in money now available; and when the State finances will admit, no doubt there will be means appropriated for placing the institution in a way of practical operation.

There are numerous mineral springs in different localities in East Tennessee, and at some points there are accommodations for a large number of visitors.

Previous to the war, the East Tennessee Medical Society was in successful operation. By special charter it had the right to grant diplomas, and included most of the medical men in the whole region. This Society has not been revived since the war, but it is contemplated to take measures at an early day to accomplish its reörganization.

F. K. BAILEY.

Proceedings of Societies.

CLARK COUNTY MEDICAL SOCIETY.

This Association met at the court-house, July 1st. President F. H. Jennings in the chair. Fifteen members present.

Dr. F. R. Payne read a paper on Concentrated Organic Remedies. He recommended the use of aconitin, xanthoxylin, fraserin, prunin, hyoscyamin, and atropin, in many diseases. He contended that these concentrated remedies, when pure articles can be obtained, are more convenient for country practitioners, who not only prescribe, but dispense their remedial agents. They are more convenient than fluid extracts.

Dr. Payne then requested the Society to examine a case of displacement of the crystalline lens, in the eye of a little girl, 12 years of age. Dr. Mitchell presented a case of fatty tumor of the chest. Both of these cases were fully discussed, and appropriate treatment recommended.

Dr. R. L. Payne was then made a member of the Society, and read a paper on Puerperal Convulsions, the treatment of which was then fully discussed.

Dr. McCord was in favor of the free use of chloroform, especially after suspended deglutition. He had never witnessed any bad effects from the use of this remedy, and had used it in many diseases, but regarded it as safe as any other remedial agent.

Dr. Jennings was rather afraid of chloroform, but regarded the lancet as the great remedy in this formidable malady, when used at the proper time; but the remedy must be pushed to syncope.

Dr. F. R. Payne contended that there were two forms of puerperal convulsions—centric and eccentric. In the first of these there is congestion or irritation at the nerve centres; but in the second, the irritation is at the periphery of the nerves. He regarded it as very important that the physician should clearly understand these two forms of this disease, as the treatment must, if rational, strictly conform to the true pathology of the disease. We may have convulsions in a pale, cachectic woman, caused by improper or indigestible food, and in such cases the lancet would be very improper; but in all plethoric, short-necked, full-blooded patients, he regarded the lancet as the sheet-anchor and only hope.

Dr. McCord agreed with Dr. Payne, in his remarks, and regarded this as one of the most formidable diseases of the lying-in chamber; and every physician should thoroughly comprehend its true pathological character.

Dr. F. R. Payne was of the opinion that this disease might be prevented, in a great majority of cases, by proper remedies. He invariably recommended in all primapara cases of full habit, the free use of saline purgatives for two or three months previous to confinement, and has no fear of puerperal convulsions.

Dr. McCord verbally reported a case, where medicines could not be administered internally, and the patient was pronounced beyond the reach of remedies; but by the continued and cautious use of chloroform she recovered.

Dr. Price then read a paper on Indigestion, which was fully discussed and referred to the Publishing Committee. He gave subnit. bismuth, with antacids, zingiberis, and sodæ. This paper entered fully into the etiology and pathology of the disease, and evinced thorough research on the part of the author.

Dr. McCloud read a paper on Hemorrhage, but, at his own request, he was permitted to retain the manuscript, to be completed at the next meeting of the Society.

Dr. Payne then read a paper on Abortion, which was freely discussed by nearly all the members; after which, Dr. Mitchell offered the following resolution, which was unanimously adopted:

Resolved, That a committee of one in each township be appointed, to report, at our next meeting, all cases of abortion in their respective townships, and ascertain, if possible, whether they were *procured* or *accidental*.

In the discussion of this resolution, it was conceded that criminal abortions were fearfully frequent, and that the crime, as a general rule, was committed by irregular practitioners, druggists, and pretended female accoucheurs; and that it was the duty of all true physicians to aid the officers of the law in prosecuting such offenders.

Dr. Steelsmith was proposed as a member of this Society; but, he being a stranger to all present, his case was referred to the Board of Censors.

A case of idiocy was brought before the Society, for examination, by request of the County Board of Supervisors, and the following resolution was unanimously passed, after examination and inquiry in regard to the case:

Resolved, That, having examined John White, one of the County poor, we believe him to be idiotic, yet possessed of slight intelligence, and may be able to learn some useful business if properly instructed.

A long discussion was then had on the duties of the physician, medical ethics, etc.

This meeting was one of unusual interest, and many important subjects were before the Society; many gems of practical experience were produced for mutual benefit; and, we are happy to say, the best of feeling prevailed. We are confident that since the organization of this Society there has been a better feeling prevailing among the physicians of Clark County, and that the people are becoming satisfied that we do not meet for the purpose of combination, thus enabling us to charge "*unreasonable bills*," but that the object is to secure mutual improvement, and thus, by consultation and discussion, better qualify ourselves to successfully combat the diseases of this locality.

F. H. JENNINGS, *Pres't.*

J. A. PATTON, *Sec'y.*

Book Notices.

A Therapeutical and Practical Treatise on Midwifery; Including the Diseases of Pregnancy and Parturition. By P. CAZEAUX, Member of the Imperial Academy of Medicine; Adjunct Professor in the Academy of Medicine of Paris; etc., etc., etc. Adopted by the Superior Council of Public Instruction. Revised and Annotated by S. TARNIER, Adjunct Professor in the Faculty of Medicine of Paris, Hospital Surgeon, etc. Fifth American from the Seventh French Edition. By W. R. BULLOCK, M.D. With One Hundred and Seventy-Five Illustrations. Philadelphia: LINDSAY & BLAKISTON. 1868. For sale by COBB, PRITCHARD, & Co., Chicago.

Cazeaux's Midwifery has been so long before the profession, and its merits have been so well appreciated, both in this country and Europe, that comments are unnecessary. The present edition is made more valuable by the notes and additions by Tarnier, and is published in excellent style, with a copious and convenient index.

A Manual on the Extraction of Teeth. Founded on the Anatomy of the Parts Involved in the Operation; the kinds and proper construction of the Instruments to be used; the Accidents liable to occur from the Operation, and the proper Remedies to retrieve such Accidents. By ABRAHAM ROBERTSON, D.D.S., M.D., Author of Prize Essay on Extracting Teeth; Fellow of the N.H. Medical Society, etc., etc., etc. Second Edition. Philadelphia: LINDSAY & BLAKISTON. 1868.

This is an elegantly published duodecimo volume of 200 pages. It will be found very useful to dentists and all physicians who engage in the extraction of teeth.

Dental Materia Medica. Compiled by JAMES W. WHITE. Philadelphia: SAM'L S. WHITE. 1868.

This is a small duodecimo volume of 108 pages, neatly printed and bound; and, from a hasty glance at its contents, we should regard it as a work of real value and convenience to every practical dentist, and not without interest to the physician.

The Anatomy and Histology of the Human Eye. By A. METZ, M.D., Professor of Ophthalmology in Charity Hospital Medical College, Cleveland, Ohio. Philadelphia: Office of Medical and Surgical Reporter. 1868.

This is an octavo volume of 184 pages. The mechanical execution of the work is all that could be required. The paper, type, binding, and illustrations are decidedly good. From a hasty examination, we should say that the author had also executed his task well. His descriptions of the anatomy and histology of all the structures concerned in the organs of vision are clear, concise, and yet full. For the student, it constitutes an excellent text-book; and for the ophthalmologist and general practitioner, a very convenient work for reference.

Half-Yearly Compendium of Medical Science. Part II. July, 1868. Philadelphia: S. W. BUTLER, M.D., 115 S. 7th St.

This is the second number of the Half-Yearly Compendium of Medical Science. It contains 208 large-sized pages, with a copious index. It contains 420 articles, selected from American and foreign medical periodicals. It is published for $3 per annum, or $2 for a single copy. The numbers are issued in January and July. All those practitioners who are not able to subscribe for more than one or two medical periodicals will find the *Compendium* a very valuable work for reference.

Goff's Combined Day-Book, Ledger, and Daily Register of Patients, for the Use of Physicians.

This is a volume of 328 pages, substantially bound, and so ruled as to fill perfectly all the purposes of a day-book and ledger, with space for memoranda, and a copious index. It presents every man's account for a year, both in detail and aggre-

gate, debit and credit on the same page, ready for examination at all times, without the trouble of handling different books or posting from one to another. The book is admirably arranged to save time and promote convenience in keeping accounts, and we commend it to the attention of the profession.

Editorial.

MEDICAL COLLEGES IN THIS CITY.—The next Annual Lecture Term in Rush Medical College commences on the 30th of September. The introductory lecture will be given by Prof. E. Powell.

The next Annual Lecture Term in Chicago Medical College will commence on the 5th of October. The introductory lecture will be given by Prof. N. S. Davis. The laboratory for teaching analytical and practical chemistry in this College is now ready for the reception of students, and Prof. Wheeler informs us that a class is now entering upon its work in that department. The arrangements are very complete, and the instruction in practical chemistry will be as thorough as in the best schools in France and Germany.

CORRECTION.—UNIVERSITY OF NASHVILLE.—In a previous number of the EXAMINER, it was stated that "an effort seems to have been made to remove Professors Jennings, Eve, and Jones from their chairs in the Medical Department of the University. They denied the right of the rest of the Faculty to remove them, and appealed to the proper court. A decision has been recently rendered, sustaining their appeal, and enjoining the rest of the Faculty from interfering with them in the performance of their duties in the College." We made the statement from what purported to be the decision of the Judge or Chancellor having the case in charge, and, consequently, had no reason to doubt its correctness.

In the August number of the *Nashville Journal of Medicine*

and Surgery its correctness is denied, and the alleged facts in the case set forth. After stating the facts, however, the editor of that journal adds: "We know that Dr. Davis thought he had authority for his statement, but he knew it was one-sided, and a flat contradiction of its truth was before him which he saw proper to set aside, and he has thus constituted himself an agent for placing before the public a statement false in every particular."

Perhaps Dr. Bowling, in his sanctum in Nashville, may know better than we do what we have before us at any given moment of time here in Chicago; but we doubt it. Now, the truth is, we did make our statement on the *authority* of what purported to be the written decision of a Judge or Chancellor in Nashville. We did *not* know that any such decision was "one-sided." And we did not have before us, at that time, any contradiction of its truth, either *flat* or round. Such contradiction may have existed in a previous number of the *Nashville Journal*, or elsewhere; but if so, we had overlooked it. From the statements in the August number of the *Nashville Journal*, it appears that certain differences had arisen in the Faculty, by which it was claimed that Professors Jennings, Eve, and Jones had, by their own acts, vacated their chairs, and other men were appointed to fill them. The three named appealed to Chancellor Shackleford for an injunction, and it was granted, as we stated in the paragraph to which exceptions have been taken. But Judge Milligan, of the Supreme Court of Tennessee, issued a *supersedeas*, overruling the decision of the Chancellor. This latter part was unknown to us when we penned the former paragraph. And we are happy to end the matter by quoting the following, which is the last authoritative announcement in the *Nashville Journal:*—"Just as we are going to press, we are happy to announce that all suits against the new Faculty are withdrawn, and that there will be no further disturbance."

So may it be!

THE MEDICAL GAZETTE OF NEW YORK.—This sprightly little sheet had ceased to visit its readers until some of our exchanges

had suggested its death. But its publication has been resumed, and the number for August 22d makes a better appearance than those preceding it.

Honors.—The Royal Medical and Chirurgical Society of London recently conferred the title of Foreign Honorary Fellow on Dr. Samuel D. Gross, of Philadelphia.

Dr. William Marsden, of Quebec, was recently made the recipient of a handsome present, from the citizens of that city, as a testimonial for his services in reference to the cholera.

Bennett Eclectic Medical College.—We have received a circular announcing that a new college with the above title had been organized in this city. The ridiculous manner in which it prostitutes the name of Dr. Bennett, and the customary slanders upon the regular profession, show plainly the character of those engaged in the organization. *Eclectic* Colleges have been tried in Cincinnati and other cities, but with no very flattering degree of success.

Nebraska State Medical Society.—The profession in Nebraska have recently organized a State Medical Society, with the following officers:—President, G. C. Monell, M.D.; Vice-President, N. C. Larsh, M.D.; Corresponding Secretary, G. C. Danise, M.D.; Permanent Secretary, S. D. Mercer, M.D.; Treasurer, D. Whittington, M.D. The next annual meeting is to be held in Nebraska City, on the first Tuesday in June, 1869.

Medical College Changes.—It is said that the Medical Department of Bowdoin College is to be removed to Portland, Maine.

William Warren Greene, M.D., late Professor of Surgery in the Michigan University, has taken up his residence in Portland, Maine.

Profs. Austin Flint, Senior and Junior, and Foster Swift, have resigned their places in the Long Island College Hospital.

NEW SYDENHAM SOCIETY'S PUBLICATIONS.—Messrs. Lindsay & Blakiston, of Philadelphia, are the agents in this country for the sale of the publications of this Society. The subscription price for 1868 is ten dollars in currency.

MEDICAL DEPARTMENT OF UNIVERSITY OF MICHIGAN.—The troubles in the Medical Department of this University are said to have been fully and satisfactorily settled.

MONEY RECEIPTS TO AUG. 28TH.—Drs. Aug. Rhoads, $3: A. E. Van Deventer, 3; Wm. B. Hart, 3; John Sharp, 3; J. Guinan, 3; J. W. Duncan, 3; C. R. Parke, 3; P. S. Macdonald, 3; — Griffen, 1.50; L. T. Hewins, 5; R. S. Addison, 3.

COOK COUNTY HOSPITAL, CITY OF CHICAGO.

WINTER TERM OF CLINICAL INSTRUCTION, 1868–69.

The regular course of clinical lectures in this institution will commence on Friday, Oct. 2d, and continue for *nine months*.

The prosperity of this great public hospital, liberally supplied with the most adequate means for clinical and practical instruction, affords an extensive field for the study of every form of medical, surgical, and special disease.

During the year ending July 31st, 1868, over 1100 patients were treated in this hospital, and upwards of 100 important surgical operations were performed. In the Lying-in Department, there were 98 births.

The large number of autopsies—usually made in presence of the class—together with the pathological museum, gives an excellent opportunity for the study of morbid anatomy. The Dispensary, for out-patients, is organized to so classify diseases that every patient shall receive the most thorough attention. This, alone, furnishes a large number of interesting cases.

Lectures will be delivered as follows: Surgical Clinics, with operations, and Medical Clinics, with examinations at the bedside, on Tuesdays and Fridays; Eye and Ear Clinics, with operations, and Clinic on Diseases of Women and Children, on Saturdays. Commencing invariably at 1½ o'clock P.M., and continuing two hours.

It is the purpose of the medical staff to use and develop the immense resources of this institution, for the promotion of medical education; and to add whatever is possible to the means and facilities for medical study attainable in Chicago—the object for which they will labor being an exalted standard of professional knowledge among the students and such junior practitioners as may seek our city for this purpose.

Fee for admission to the Hospital, $5. Graduate practitioners free.

LECTURES ON THE EYE AND EAR.

In addition to the course of lectures and operations on the Eye and Ear, embraced in the regular term of clinical instruction at the County Hospital, Chicago, Dr. Hildreth will also deliver a *Special Course* on these organs.

The theory of the ophthalmoscope; the analysis and treatment of "accommodation," astigmatism, and other optical and mechanical defects of the eye, will be fully dwelt upon. The methods of exploring the ear will be fully demonstrated.

The number of interesting cases in the Eye and Ear Wards of the hospital insures abundant opportunity for becoming familiar with ophthalmic and aural disease.

THE CHARITABLE EYE AND EAR CLINIC,

A Free Dispensary, established by prominent citizens of Chicago, is likewise accessible to students.

The Hospital Ticket admits, without further charge, to all of the above.

TREATMENT OF DISEASES OF THE HEART.—Dr. S. O. Habershon, Physician to Guy's Hospital (Guy's Hospital Reports, 1867), lays down seven principles of treatment for diseases of the heart: 1st, to lessen its work; 2d, to insure regularity of action in avoiding all excitement; 3rd, to lessen the distention of the right heart by purgatives, diuretics, etc.; 4th, to prevent syncope attendant upon exhaustion; 5th, to strengthen the fibres of the heart by suitable out-door exercise; 6th, to prevent fibrillation of the blood by suitable remedies, for instance, carbonate of ammonia; and 7th, to prevent secondary complications, such as pneumonia, pleuritic effusion, etc.

Mortality Report for the Month of July:—

CAUSES OF DEATH.

Abscess,	1	" chronic,	6	Intestines, inflammation of	1
Accident, drowned	16	" & convulsions	5	" injuries of	1
" by engine,	1	Dropsy,	2	Jaundice,	1
" fall,	2	Dysentery,	17	Kidneys, Right's disease of	1
" horse kick,	1	" chronic,	1	Leg, tumor of	1
" poisoning,	1	" complicated with pneumonia,	1	Lightning, struck by	3
" railroad,	2	" & teething,	1	Liver and kidneys fatty degeneration of	1
" revolver,	1	Endocarditis,	1	Liver, cirrhosis of	1
" scalding,	1	Enteritis,	4	" inflammation of	1
Anæsarca,	1	" complicated with meningitis,	2	Lungs, congestion of	1
" and diarrhœa	1	Enteritis, complicated cholera infantum,	1	" " of at childbirth,	1
Apoplexy,	10	Encephatitis,	5	" congestion of and measles,	1
Apthia and diarrhœa,	1	Enterocolites	3	Meningitis	15
Apoplexy, from over-exertion and heat,	1	Epistaxis,	1	" acute,	1
Ascitis, abdominal,	1	Epilepsy	2	" foll. diarrhœa,	1
Atelectasis pulmonium,	1	" superinduced by heat,	1	", cerebro spinal,	8
Births, premature,	11	Erysipelas,	1	" tubercular,	4
" still,	37	" foll. measles,	1	Mania, puerperal	1
tedious,	2	" traumatic,	1	Manslaughter,	1
Bowels, congestion of, and abortion,	1	Exhaustion from exure,	2	Measles,	7
" inflammation,	8	Fever, congestive,	2	Metrophibitis, purepe-ral,	1
" perforation,	1	" " and diarrhœa,	1	Miliaria puperanum, retroception of	1
" ulceration of,	1	" puerperal,	4	Mouth, canker sore of	1
Brain, congestion of,	6	" scarlet,	11	Myetitis, acute	1
" disease of,	2	" " and diptheria,	1	Nutrition, defective	1
" inflammation	9	" typhoid,	9	Œdema glottde,	1
" tubercular disease	1	" and gastromalaxy,	1	Old age,	4
Catarrh,	2	Gastritis	1	" and debility,	3
Cholera infantum,	273	" and intemperance,	1	" " paralysis,	1
" convulsions,	8	Gastroenteritis,	1	Palate, fissure of,	1
" dysentery,	1	Hepatitis,	1	Paralysis,	3
" foll. measles,	1	Heart, disease of	2	Parotitis,	1
Cholerine,	1	" dropsy of	1	Paralysis and old age,	1
Cholera infantum and phrenitis,	1	" organic disease	2	Pericarditis	1
Childbirth, hemorrhage from,	1	" hypertrophy of	1	Periostitis of inferior maxillary,	1
Cholera morbus,	7	" valvular disease	2	Pistolshot through abdomen,	1
Childbirth	1	Hemorrhage, internal,	1	Pleuritis, double, and emboli in heart,	1
Convulsions,	74	Hernia, strangulated	2	Poisoned wound from snake bite,	1
" puerperal,	2	Hydrocephalus	10	Phthisis, acute,	1
" sunstroke,	1	" acute	7	" pulmonalis,	32
" urasmic,	1	Intemperance and exposure,	2	" " & abortion,	1
" teething,	15	Idigestion,	1	Pyæmia,	1
Croup,	3	Inanition,	9		
Cyanosis,	1	Ileus,	1		
Debility,	8				
" and old age,	1				
Delirium tremens,	6				
Diphtheria,	2				
Diabetes milletus,	1				
Diarrhœa,	34				

Pneumonia,	17	Sunstroke,	19	Uræmia,	2
" complicated with measles,	3	Small-pox,	2	Uterus, cancer of,	1
" typhoid,	3	Stomach, congestion of	1	" hemorrhage of,	1
" and inflammation of bowels,	1	Stomatitis,	2	Whooping cough,	6
Rheumatism, inflammatory,	1	Tabes mesenterica,	19	" " & convulsions,	3
Scrofula,	2	Tetanous traumaticus,	1	Whooping cough and diarrhœa,	4
Septæmia,	1	Teething,	27	Unknown,	1
Suicide,	4	" and diarrhœa,	5		
		" and meningitis,	1	Total	896
		Tumor, abdominal,	1		
		" ovarian,	3		

COMPARISON.

Deaths in July, 1868,	896	Deaths in July, 1867,	597	Increase,	299
Deaths in June, 1868,	305	Increase,			591

AGES.

Under 5	654	40 to 50	40	90 to 100	0
5 to 10	27	50 to 60	24	100 to 110	0
10 to 20	24	60 to 70	15	Unknown	2
20 to 30	45	70 to 80	11		
30 to 40	54	80 to 90	0	Total	896

Males,	510	Females,	385	Total,	896
Single,	765	Married,	131	Total,	896
White,	891	Colored,	5	Total,	896

NATIVITY.

Chicago	555	England	13	Scotland	5
Other parts U. S.	92	Germany	110	Sweden	26
Austria,	2	Holland	2	Switzerland	1
Bohemia	5	Ireland	49	Unknown	5
Canada	8	Norway	16		
Denmark	1	Poland	4	Total	896
France,	1	Atlantic Ocean,	1		

MORTALITY BY WARDS FOR THE MONTH.

Ward.	Mortality.	Pop. in 1868.	One death in		Ward.	Mortality.	Pop. in 1868.	One death in	
1	10	11,991	1,199	1-10	14	63	14,168	224	6-7
2	19	13,739	723	1-9	15	65	20,429	314	2-7
3	43	16,620	386	1-2	16	31	16,011	519	2-3
4	42	16,499	392	4-5	Bridewell,	2			
5	36	13,434	373	1-6	County hosp.	19			
6	50	12,507	250	1-7	Chi. River,	3			
7	88	21,957	249	1-9	Mercy Hosp.	2			
8	59	14,003	237	1-3	Yard of R. I. Railroad,	1			
9	57	18,050	234	1-5					
10	28	13,644	487	2-5	Soldier's hom.	1	St. Joseph's Orph. As.	6	
11	50	13,317	266	1-3	Marine hos.	1	Home for Friendless,	2	
12	105	14,739	141	1-3	Orphan asyl.	1	Immigrants,	56	
13	49	11,113	226	4-5	Lake Michi.	7	Police Stat. 12 St.,	1	

Total, 896

Druggists Renewing Prescriptions.—The Academy of Medicine, New York, after a long and impartial discussion of the various points at issue, adopted unanimously the following preamble and resolution, and referred them to the State Medical Society:

Whereas, The attention of this Academy has been called to the repetition of prescriptions, containing active ingredients, by druggists, without the written order of physicians; and whereas, serious consequences to patients are liable to ensue; therefore,

Resolved, That we respectfully request the druggists of this city not to repeat such a prescription without the written order of the physician, he being the only competent judge of the propriety or necessity of such renewal.

Uterine Injections.—At a recent meeting of the Imperial Academy of Medicine, the subject of uterine injections, which of late has occupied the attention of that learned body, was again briefly discussed, and MM. Gosselin, Depaul, and Ricord condemned this method of therapeutics, which, despite the perfection of the instruments adopted, may determine an attack of metro-peritonitis, which, according to the declaration of M. Gosselin, has already occurred in the service of M. Jobert.—*L'Evenement Medicale.*

Musical Bullet Probe.—At the Paris Exposition there was exhibited a probe for announcing audibly the presence of a bullet in a wound. If the points of the instrument came in contact with a metallic body, an electrical circuit was made and a small bell rang.

An ozone generator was also exhibited, made of flat plates of glass coated with tin foil and electrified by a Ruhmkoff coil. A stream of air driven through the apparatus came out so highly charged with ozone as to be irrespirable, and possessing the power of bleaching paper, linen, soiled engravings, and so forth. This discovery is spoken of as likely to be of much practical value in the arts.—*Pacific Medical and Surgical Journal.*

Gossypium as an Emmenagogue and Parturifacient.—Dr. Bellamy, of Columbus, Ga., says of the common cotton-plant, gossypium (*Atlanta Med. and Surg. Journal*):—"I am fully satisfied, from the experiments and impartial tests I have given the remedy, that it is fully equal, if not superior, to ergot in promoting the various functions of the uterine organs. I look upon it as a sure, speedy, and safe remedy, not only for

difficult, painful, contracted labors, but also to control all the irregularities of females, and to alleviate their peculiar monthly sufferings. It is very certain that its effects are so powerful upon the uterine system as to produce miscarriage, if administered during pregnancy. I feel that its merits cannot be too highly extolled, and deem it too valuable a remedy to remain hidden in the depths of obscurity. I consider it preferable to ergot. The proper time to gather the root is when it is as old as possible, without being injured by the severe frosts: therefore, it is best when gathered during the months of October and November."

Deaths from Sunstroke.—An examination of the statistics of death from sunstroke in the city of New York, gives the following exhibit: In August, 1853, 224 persons died from sunstroke; in 1863, there were 135 deaths from sunstroke, and during the present year up to Saturday, the 18th ult., there were no less than 883 deaths from heat alone, as reported by the papers.—*Ex.*

An Alleged Preservative against the Cattle Plague.—Chloride of copper is now extensively used in Germany against the cattle plague, or rather as a preservative. The *modus eperandi* is as follows:—

Take green crystallized chloride of copper, eight gram., spirits of wine, two kilog., and dissolve. With this solution impregnate a pad of cotton, lay it on a plate, and set fire to it in the centre of the stable, turning the animals' heads towards the flame, so as to make them breathe the fumes. This operation is performed morning and evening, burning one pad for every three heads of cattle. At night, a spirit-lamp filled with this solution is lighted in the stable. To prevent accidents, the flame is surrounded with wire gauze. The liquid is also administered internally, with the addition of fifteen gram. of chloroform for the above quantity. A teaspoonful of this is put into the animals' drink three times a day. As a further precaution, the litters are watered with the same solution.

Effect of Digitalis on the Mind.—It is a popular opinion that digitalis acts injuriously upon the *memory*, and that it hastens childishness in elderly persons. Undoubtedly it has a peculiar and specific influence on the mind, probably through its remarkable power over the circulatory system. It has recently been used in Germany with success in the treatment of

hallucinations. In the *Allg. Ztschr. fur Psychiatrie* a case of a woman is reported, aged 38 years, who was constantly troubled with the appearance of devils and imps, brandishing flames and threatening to strangle her. She was placed on digitalis (℈ss., aquæ ℥v., ℥j. t. d.), and in two or three months was quite restored.

The real effects of the drug on mental action should be carefully studied.

BELLEVUE HOSPITAL MEDICAL COLLEGE,

CITY OF NEW YORK.

SESSION OF 1868-'69.

FACULTY.

ISAAC E. TAYLOR, M.D., Emeritus Prof. of Obstetrics and Diseases of Women and Children, and President of the College.

JAMES R. WOOD, M.D., LL.D., Emeritus Prof. of Surgery.

FRANK H. HAMILTON, M.D., Prof. of Practice of Surgery with Operations.

LEWIS A. SAYRE, M.D., Prof. of Orthopedic Surgery.

ALEXANDER B. MOTT, M.D., Prof. of Surgical Anatomy with Operations.

W. H. VAN BUREN, M.D., Prof. of Principles of Surgery with Diseases of the Genito-Urinary System.

BENJAMIN W. McCREADY, M.D., Prof. of Materia Medica and Therapeutics.

GEORGE T. ELLIOT, M.D., Prof. of Obstetrics and Diseases of Women and Children.

FORDYCE BARKER, M.D., Prof. of Obstetrics and Diseases of Women and Children.

STEPHEN SMITH, M.D., Prof. of Descriptive and Comparative Anatomy.

AUSTIN FLINT, M.D., Prof. of Principles and Practice of Medicine.

R. OGDEN DOREMUS, M.D., Prof. of Chemistry and Toxicology.

WILLIAM A. HAMMOND, M.D., Prof. of Diseases of the Mind and Nervous System.

AUSTIN FLINT, JR., M.D., Prof. of Physiology and Microscopy, and Secretary of the Faculty.

The Preliminary Term will open on Wednesday, September 16, 1868, and will continue until the opening of the Regular Session, October 14, 1868. A distinctive feature in the method of Instruction in this College is the union of Clinical and Didactic Teaching, and all the Lectures are given within the Hospital Grounds.

FEES FOR THE REGULAR SESSION.

Fees for Tickets to all the Lectures during the Preliminary and Regular Term, including Clinical Lectures,	$140 00
Matriculation Fee,	5 00
Demonstrator's Ticket (including material for dissection),	10 00
Graduation Fee,	30 00

For the Annual Circular and Catalogue, giving regulations for graduation and other information, address the Secretary of the College, Prof. AUSTIN FLINT, JR., Bellevue Hospital Medical College.

CHICAGO MEDICAL COLLEGE.

The regular Annual Lecture Term in this Institution will commence on the first Monday in October, and continue until the fourth Tuesday in March following. Clinical Lectures *daily* throughout the term.

FACULTY.

N. S. DAVIS, M.D., PRES'T OF FACULTY, 166 State Street,
Professor of Principles and Practice of Medicine and of Clinical Medicine.

W. H. BYFORD, M.D., TREAS. OF FACULTY, 62 State St.,
Professor of Obstetrics and Diseases of Women and Children.

EDMUND ANDREWS, M.D., SEC'Y OF FACULTY,
81 Monroe Street,
Professor of Principles and Practice of Surgery and of Military Surgery.

H. A. JOHNSON, M.D., 611 Wabash Avenue,
Professor of Diseases of Respiratory and Circulatory Organs.

C. GILBERT WHEELER, B.S.,
Professor of Organic Chemistry and Toxicology.

RALPH N. ISHAM, M.D., 47 Clark Street,
Professor of Surgical Anatomy and Operations of Surgery.

J. H. HOLLISTER, M.D., 30 Washington Street,
Professor of General Pathology and Pathological Anatomy.

THOMAS BEVAN, M.D., 81 Monroe Street,
Professor of Public Hygiene.

R. J. PATTERSON, M.D.,
Professor of Medical Jurisprudence.

J. S. JEWELL, M.D.,
Professor of Descriptive Anatomy

DANIEL T. NELSON, M.D., 169 Dearborn Street,
Professor of Physiology and Histology.

M. O. HEYDOCK, M.D., 92 Dearborn Street,
Professor of Materia Medica and Therapeutics.

C. GILBERT WHEELER, B.S.,
Professor of Inorganic Chemistry.

E. O. F. ROLER, M.D., 62 State Street,
Adjunct Professor of Obstetrics.

J. M. WOODWORTH, M.D., Lombard Block,
Demonstrator of Anatomy.

S. A. McWILLIAMS, M.D., 166 State Street,
Assistant to Professor of Anatomy.

JULIEN S. SHERMAN, M.D.,
Curator of the Museum.

NORMAN BRIDGE, M.D.,
Assistant to the Demonstrator of Anatomy.

FEES.

For the Winter Term, admitting to all the Lectures in the College,	$50.00
Graduation Fee,	20.00
Matriculation Fee,	5.00
Dissecting Ticket,	5.00
Hospital Ticket,	6.00

The Summer Reading and Clinical Term commences on the first Monday in April, and continues until the first Monday in July; and is free to all matriculated Students of the College. Boarding, $3.50 to $4.50 per week. For further information, address

E. ANDREWS, M.D., *Sec'y of the Faculty.*